

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEW MEXICO

CHEVRON MINING,

Plaintiff

vs.

NO. 1:13-CV-00328 PJK/JFR

UNITED STATES OF AMERICA,  
UNITED STATES DEPARTMENT OF THE INTERIOR,  
UNITED STATES DEPARTMENT OF AGRICULTURE,

Defendants.

TRANSCRIPT OF PROCEEDINGS

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BEFORE: HONORABLE JUDGE PAUL KELLY  
UNITED STATES 10TH CIRCUIT JUDGE

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Page 448

1

## I N D E X

2

WITNESS:

PAGE:

3

MARY SITTON

4

Cross-Exam by Ms. Crisham Pellegrini  
Redirect Examination by Mr. Augustini

452

461

5

FREDERIC QUIVIK

6

Cross-Examination by Mr. Todd

475

7

Redirect Examination by Mr. Harrison

590

8

JAY BRIGHAM

9

Cross-Examination by Mr. Hopson

627

Redirect Examination by Mr. Hoshijima

636

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Certificate of Reporter

651

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1                   THE COURT: You may proceed.

2                   MR. TODD: Good morning, Your Honor.

3                   A few housekeeping matters. First,  
4 Your Honor, I mentioned yesterday there were some  
5 discovery that Chevron wanted to offer and we had to  
6 confer with the Government. We have done that, and  
7 have agreed that all of the discovery documents that  
8 we tendered in Docket Number 223 may be admitted.

9                   THE COURT: Very good.

10                  MR. TODD: Secondly, Your Honor, I  
11 realized at the end of the day that there was two  
12 exhibits I used with Dr. Rigby that I failed to move  
13 into evidence. That was CX109, CX110 and CX47.  
14 Those are the maps that I overlaid.

15                  THE COURT: All right. Any objections?

16                  MS. KIMBALL: No objections.

17                  MR. TODD: They're admitted, 109, 110, and  
18 47, all CX.

19                   (Exhibits admitted, CX109, CX110, CX47.)

20                  MR. TODD: Thirdly, Your Honor, we have  
21 reviewed the case as it has gone on so far and based  
22 on the evidence to this point, we see no need to  
23 call Mr. Cryderman, who is the witness we were going  
24 to call tomorrow --

25                  THE COURT: Okay.

1                   MR. TODD: -- the molybdenum fellow, so  
2 with that, Chevron needs only hold the evidence open  
3 for Dr. Haddad, and we hope to get a date when we  
4 can get him to Santa Fe and we will confer and come  
5 to you.

6                   THE COURT: All right. Very good.

7                   MR. TODD: And the final point, the case  
8 management order provides for 40 days from the close  
9 of trial to submit post-trial briefs and findings  
10 and conclusions. Depending on when Dr. Haddad gets  
11 cross-examined, we may need to play with that date,  
12 but we can take that up later.

13                  THE COURT: Okay. Thank you.

14                  MR. TODD: With that, we leave it to the  
15 Government.

16                  THE COURT: Thank you.

17                  Counsel, you may call your first witness.

18                  MR. AUGUSTINI: Good morning, Your Honor.

19                  The United States calls Mary Sitton.

20                  (Whereupon, the witness was sworn.)

21                  THE DEPUTY CLERK: Please be seated and  
22 state and spell your name for the record.

23                  THE WITNESS: My name is Mary Sitton. The  
24 last name is spelled S-I-T-T-O-N.

25                  MR. AUGUSTINI: Good morning, Ms. Sitton.

1                   Did you prepare a written direct testimony  
2    for the Court in this matter?

3                   THE WITNESS: I did.

4                   MR. AUGUSTINI: Do you have a correction  
5    to make before we offer it?

6                   THE WITNESS: I do. It is on Page 15,  
7    Paragraph 36.

8                   We referenced one of the piles in that  
9    paragraph as Sugar Shack and it should be Sulphur  
10   Gulch South.

11                  MR. AUGUSTINI: Okay. Any other  
12    corrections?

13                  THE WITNESS: No.

14                  MR. AUGUSTINI: And with that, is your  
15    testimony true and correct, to the best of your  
16    knowledge?

17                  THE WITNESS: Yes.

18                  MR. AUGUSTINI: The United States offers  
19    Ms. Sitton's direct testimony, Your Honor.

20                  THE COURT: Very good. It will be  
21    admitted.

22                  (Ms. Mary Sitton's direct testimony was  
23    prefiled and admitted.)

24                  MS. CRISHAM PELLEGRINI: Good morning,  
25    Your Honor.

## 1 CROSS-EXAMINATION

2 BY MS. CRISHAM PELLEGRINI:

3 Q. Ms. Sitton, I only have two topics from  
4 your testimony to discuss with you this morning.

5 We're going to start by talking about your  
6 experience. Your experience and expertise is in  
7 aerial photographic research acquisition and  
8 analysis; is that correct?

9 A. Yes.

10 Q. And you have never testified in court as  
11 any other sort of expert?

12 A. No.

13 Q. You are not an expert in mining?

14 A. No.

15 Q. You are not an expert in environmental  
16 engineering?

17 A. No.

18 Q. You are not a certified geologist?

19 A. I have a background in geology. I have a  
20 Bachelor's degree in geology, but I am not a  
21 certified geologist, no.

22 Q. You are not an expert in soil science?

23           A.       I am familiar with soil science but I am  
24       not an expert.

25 Q. And you're not an expert in land patents?

1 A. No.

2 Q. And you are not an expert in mining  
3 claims?

4 A. No.

5 Q. So in your testimony, Ms. Sitton, when you  
6 testified and talk about the record of decision from  
7 the EPA, you are not testifying regarding the  
8 scientific or the technical basis for the EPA  
9 recommendations and conclusions, correct?

10 A. Well, I use those documents in  
11 corroboration with my analysis of the aerial  
12 photographs, so I am documenting what is in the  
13 reports and I am using that in correspondence with  
14 my analysis of the aerial photographs.

15 Q. But you are not just -- sorry, just to  
16 clarify, you're not testifying regarding the  
17 technical basis for the EPA's conclusions?

18 A. I don't doubt their technical basis, but  
19 you know, I think it is an accurate document.

20 Q. Then the next topic I want to discuss with  
21 you deals with the tailings area.

22 A. Uh-huh.

23 Q. In your testimony, you discuss the western  
24 tailings impoundment.

25 A. I discussed both, but yes.

1           Q.     And you understand that Molycorp purchased  
2     the land for the western tailings impoundment from  
3     the Federal Government?

4           A.     I do.

5           Q.     And prior to that sale, Molycorp informed  
6     the Government that they plan to use the land for  
7     tailings, correct?

8           A.     Yes.

9           Q.     And prior to the sale, the Government  
10    determined that that land that they were selling to  
11    Molycorp would -- the highest and best use of that  
12    land would be for tailings?

13          A.     I think that is what the document said.

14          Q.     Next to or near the tailings impoundments,  
15    Molycorp held unpatented mill site claims, correct?

16          A.     Yes.

17          Q.     Those unpatented claims were known as  
18    pending claims?

19          A.     Right.

20          Q.     Okay. And you analyzed aerial photographs  
21    of the tailings area, which included these  
22    unpatented claims, from four separate years?

23          A.     Yes.

24          Q.     The first picture was from September 1965?

25          A.     Correct.

1           Q.     The next in time was October of '74?

2           A.     Correct.

3           Q.     And then the next in time was September of  
4     '81?

5           A.     Correct.

6           Q.     And then the final picture or photograph  
7     was from June 1990?

8           A.     Yes.

9           Q.     Now, in your review of the October '74,  
10   photograph, you did not identify any tailings  
11   located on those unpatented mill site claims,  
12   correct?

13          A.     That is correct.

14          Q.     However, when you looked at the photograph  
15   from 1981, you did note some tailings on those  
16   unpatented claims, correct?

17          A.     There was a small amount of tailings in  
18   Pinon 11, it was less than an acre.

19          Q.     And so, based on your review of the  
20   photographs, you're not able to tell when exactly  
21   Molycorp started putting tailings on those  
22   unpatented mill site claims, correct?

23          A.     Well, there was only one and that was  
24   Pinon 11, so it had to have occurred -- there is a  
25   gap in the aerial photographs, from '74 to '81, so

1 it was there in '81. It was less than an acre and  
2 it had to be sometime prior to that date of 1981.

3 Q. So in order to help us find out when those  
4 tailings were first placed there, I want to show you  
5 Chevron Exhibit 325, which is already in evidence.

6 This document is Molycorp's 1977  
7 application to patent the Pinon claims.

8 And Molycorp will show they divided the  
9 Pinon claims into two groups.

10 Are you aware of that?

11 A. Yes.

12 Q. So they have two separate -- in this  
13 document, have two separate patent applications.

14 So if we turn to Page 3 of 10, of the  
15 first patent application, would you agree with me,  
16 Ms. Sitton, that the document states that in 1977,  
17 as of 1977, the mill sites being named in this  
18 application were presently being used to receive  
19 tailings?

20 A. That is what the document says, but that  
21 is not what the aerial photographs show. I think it  
22 is a general thing about the whole entire area.

23 I didn't see tailings in all of the mill  
24 site claims.

25 Q. Okay. Just to clarify, you didn't look at

1       a photograph from 1977, correct?

2           A.       No, but I had one from '81 and between '74  
3       and '81, I wasn't seeing any tailings in any of the  
4       Pinon claims except for that small part in Pinon 11.

5           Q.       Okay. And actually, if we go back to the  
6       front of this page, I just want to see if it covers  
7       Pinon 11.

8                   I think the first one does not.

9           A.       Does not.

10          Q.       Okay. So according to the application for  
11       these Pinon claims, Molycorp, in 1977, was presently  
12       using these mill sites for tailings, according to  
13       the document?

14          A.       That is what the document said, but that  
15       is not what I saw in the aerial photographs.

16          Q.       And then, if we turn to Page 6 of the  
17       application -- and this is the second application?

18          A.       Uh-huh.

19          Q.       And this also -- this one includes  
20       Pinon 11?

21          A.       Correct.

22          Q.       Okay. If we turn to Page 8 of 10.

23                   And in this application, would you agree  
24       with me that it states that these mill site claims  
25       were also being used to receive tailings?

1           A.     Again, that is what the document says. I  
2     think they are talking about the entire area, you  
3     know, those -- the tailings were going into the two  
4     ponds and the mill site claims were to support that  
5     activity.

6                   I didn't see tailings going into any of  
7     the ponds except for Pinon 11, and a small amount.

8           Q.     And just to clarify, this application,  
9     though, is not for the tailings impoundments,  
10    correct, it is for just the mill sites?

11          A.     That is what it says, yeah.

12          Q.     Okay. And now, if we look at what the  
13    United States was saying about these mill site  
14    claims, at the same time, I am going to show you  
15    Chevron 331, which has also already been admitted  
16    into evidence.

17          A.     Uh-huh.

18          Q.     And this is a 1979 Government Mineral  
19    Report for those same Pinon mill site claims?

20          A.     Uh-huh.

21          Q.     Okay. It has nothing to do with either  
22    the western or eastern tailings impoundment?

23          A.     Uh-huh.

24          Q.     And was the document put together by the  
25    Government?

1                   **Is that correct?**

2           A.       Yes.

3           Q.       Now, if we turn to Page 2 of the document,  
4           would you agree with me that according to the  
5           United States' Mineral Report of these Pinon claims,  
6           it states that the Pinon mill site claims are being  
7           **used for waste disposal?**

8           A.       What paragraph is that?

9           Q.       I could pull it out.

10                  Paragraph 4, underneath "Background and  
11           Land Status."

12                  The paragraph that starts with, "Molycorp,  
13           a subsidiary company of Union Oil," halfway through  
14           that paragraph.

15                  Starting, "The mill site claims are  
16           presently being used for waste disposal from these  
17           operations."

18           A.       That is what the document says, but that  
19           is not what I was seeing on the aerial photographs.  
20           And, you know, back then I don't know if waste  
21           disposal was considered like CERCLA waste either,  
22           so --

23           Q.       Okay. So you would agree with me, though,  
24           Ms. Sitton, that we now have -- there are two  
25           documents saying that tailings were being placed on

1       **the Pinon claim prior to 1981?**

2           A.     This document doesn't say tailings.  It  
3     says waste disposal.  It could be they are putting  
4     roads in, they could be putting ditches in, it could  
5     be anything.

6           **Q.     Anything that would be waste.  A road is  
7     not waste.**

8           A.     Right.  But that is what the document says  
9     but that is not what I saw in the aerial  
10    photographs.

11          **Q.     Sorry, I understand that.  I just want to  
12    clarify that we have seen, there's at least  
13    documents that states that waste is being placed on  
14    these unpatented Pinon claims prior to 1981.**

15          A.     Correct.  And it doesn't say which ones,  
16    it doesn't say how -- I'm sorry.  It doesn't say how  
17    much, doesn't say which ones and, you know -- and I  
18    looked at the aerial photographs.  And when I looked  
19    at them, I only saw tailings in Pinon 11.

20            MS. CRISHAM PELLEGRINI:  No further  
21    questions, Your Honor.

22            THE COURT:  Thank you.

23            You may redirect.

24

25

1 REDIRECT EXAMINATION

2 BY MR. AUGUSTINI:

3 Q. **Good morning, Ms. Sitton.**

4 A. Good morning.

5 MR. AUGUSTINI: Mr. Hambrick, could you  
6 please pull up USX414.

7 Q **(By Mr. Augustini) Do you recognize this  
8 signature, Ms. Sitton?**

9 A. I do.

10 Q. **Did you prepare it?**

11 A. I did.

12 Q. **What does it reflect?**

13 A. That is an aerial photograph, dated  
14 October 3, 1974, covering the tailing site in the  
15 western portion of the mine site.

16 Q. **Did you locate the site boundary depicting  
17 the tailings area with a redline?**

18 A. I did.

19 Q. **And where did you get that site boundary?**

20 A. That is URS boundary. It came off of one  
21 of their maps.

22 Q. **URS is Chevron's environmental contractor?**

23 A. Yes.

24 Q. **So you use the same boundary that Chevron  
25 uses to depict its property ownership?**

1           A.       Yes.

2           Q.       **Generally, can you indicate with a touch**  
3       **screen, what area has been discussed regarding the**  
4       **Pinon claims, where are the Pinon claims relative on**  
5       **this photo?**

6           A.       They are on the west side of the western  
7       tailings pond.

8                   There is actually a map overlay that goes  
9       on here. This is general because the map is not up.  
10      There is some over here and there is some up here  
11      (indicating).

12          Q.       **Okay. So if I add to your annotations --**  
13       **well, it is not a line, but generally the Pinon**  
14       **claims are over there (indicating)?**

15          A.       Yes.

16          Q.       **And where are these tailings that**  
17       **Chevron's counsel has been talking about, based on**  
18       **the documents in the Pinon claims, as of '74?**

19          A.       In '74, they are shown as the light-toned  
20       material below Dam 1 in the eastern pond. I mean  
21       above Pond 1 and then above Dam 4 in the western  
22       impoundment.

23          Q.       **Those are the --**

24                   THE COURT: So the white is --

25                   THE WITNESS: Yeah, those are the tailings

1 ponds. And there is some, like, kind of a greenish  
2 liquid in the southern part of the western pond.

3 THE COURT: What is the white stuff there  
4 in the --

5 THE WITNESS: That is the tailings that  
6 have settled out in the pond.

7 THE COURT: Where?

8 THE WITNESS: The tailings, you know, they  
9 take the tailings from the mill site and they slough  
10 it over into the ponds. And when it gets in there,  
11 it settles out as a light-toned settlement.

12 THE COURT: And how does the white -- I am  
13 talking about the white with the second purple arrow  
14 there.

15 THE WITNESS: Okay. In the eastern pond  
16 or the western pond?

17 THE COURT: I don't know which pond it is.  
18 I can't tell east from west here.

19 MR. AUGUSTINI: Let's clear this,  
20 Your Honor.

21 THE WITNESS: Okay. You know, I can show  
22 where the pipeline enters the -- there is a pipeline  
23 that enters the eastern impoundment from the mill  
24 site to the west. And I would have to blow this up,  
25 but it comes into the east side right there

1 (indicating), and then it flows out into this pond.

2 And then if this pond gets full --

3 THE COURT: So that white is a pond?

4 THE WITNESS: Right. It is a tailings  
5 pond.

6 THE COURT: Okay. I thought you said it  
7 was a tailings.

8 THE WITNESS: It is a tailings pond, so it  
9 receives sediment-laden liquid from the mine.

10 THE COURT: Okay. That clears it up if  
11 that is a pond there.

12 Q (By Mr. Augustini) Just to be super clear,  
13 Ms. Sitton, is the white material essentially the  
14 solids that settled down into the bottom of the  
15 tailings impoundment?

16 A. Yes.

17 MR. AUGUSTINI: And where there is liquid,  
18 Your Honor, in the western impoundment --

19 Q. (By Mr. Augustini) Are the tailings  
20 visible because what you see is liquid, correct?

21 A. Correct.

22 THE COURT: But the tailings are the white  
23 above that, is part of a pond, right?

24 THE WITNESS: Correct.

25 THE COURT: And that is showing the

1 tailings in it.

2 THE WITNESS: Right.

3 THE COURT: Okay. Thank you.

4 Q (By Mr. Augustini) Right.

5 And as of '74, it just so happens that the  
6 eastern impoundment is mostly dry; is that your  
7 interpretation of this photo?

8 A. Yeah, there may be some wet sediment in  
9 there because there is some light and some medium  
10 tone, so some of that may be wet.

11 Q. For example, the medium tone material is  
12 darker gray?

13 A. Correct.

14 Q. And is it your testimony that maybe there  
15 is some liquid in that area but not the full  
16 impoundment, correct?

17 A. Correct.

18 MR. AUGUSTINI: Just to be clear,  
19 Your Honor, we have talked about Section 35 and  
20 Section 36. I think I can see the section line.

21 A. Right.

22 Q. (By Mr. Augustini) And there is a 36.  
23 That is where I have marked the X.

24 Is that the eastern impoundment?

25 A. Yes.

1           Q.     And then, obviously, the other side is the  
2     western impoundment that is at issue in the case,  
3     correct?

4           A.     Correct.

5                   MR. AUGUSTINI: Over here, if we can zoom  
6     in to the west, Mr. Hambrick, please.

7                   THE COURT: Over where?

8                   MR. AUGUSTINI: There we are.

9           A.     That is Section 35, showing the western  
10    tailings pond.

11           Q     (By Mr. Augustini) We have the red boundary  
12    line for Chevron's property further to the west,  
13    correct?

14           A.     Yes.

15                   THE COURT: Would you move your mic over a  
16    little bit.

17           Q     (By Mr. Augustini) What have you annotated  
18    along in this area?

19           A.     There is a ditch and a berm.

20           Q.     And those are to the west of the western  
21    tailings impoundment, correct?

22           A.     Correct.

23           Q.     And then beyond that ditch, in the berm,  
24    over here (indicating)?

25           A.     That is forest and trees, trees.

1           Q.     Are those the Pinon claims?

2           A.     Yes.

3           Q.     And where is the white tailings material  
4     within those claims that Chevron is talking about?

5           A.     There are no tailings over there. That is  
6     all vegetated.

7           Q.     Now, you did mention, both in your report  
8     and your direct testimony, that as of 1981,  
9     September 1981, the next photo that you reviewed,  
10    there is a tiny portion of tailings that just sneaks  
11    into the easternmost part of Pinon 11, correct?

12          A.     Correct.

13          Q.     And that is the only one out of all the  
14    Pinon claims where you saw any tailings at all,  
15    correct?

16          A.     Correct.

17                    MR. AUGUSTINI: Mr. Hambrick, US417,  
18     please.

19          Q     (By Mr. Augustini) Ms. Sitton, do you  
20    recognize this figure?

21          A.     I do.

22          Q.     What is it, please?

23          A.     This is a September 20, 1981 aerial  
24     photograph with my annotations on the photograph and  
25     it has got the section numbers, it has got the

1 tailings pipe leading into the eastern impoundment.

2 THE COURT: And where is the pipe that you  
3 talked about?

4 THE WITNESS: Right there (indicating).

5 THE COURT: Okay. Thank you.

6 THE WITNESS: Right there (indicating).

7 Q (By Mr. Augustini) And again, just for  
8 general reference, what we are talking about here is  
9 the eastern impoundment. That is not part of the  
10 case, right?

11 A. Correct.

12 Q. And over here, again, we have the western  
13 impoundment, right?

14 A. Correct.

15 Q. And just generally --

16 THE COURT: Try to stay put. Just move  
17 that microphone over there. There you go.

18 MR. AUGUSTINI: Thank you, Your Honor.

19 Q (By Mr. Augustini) Do you see liquid in  
20 either of the impoundments as of September 1981?

21 A. There is some liquid in both of those. In  
22 Section 36, it would be at the end of the pipe that  
23 leads into it over here. And then in the western  
24 one, there is some liquid up here (indicating).

25 Q. But they are basically dry as of this

1 time, correct?

2 A. The majority of them are dry, yes.

3 Q. So what, then, is this liquid that is  
4 pooled up over here (indicating)?

5 A. That is a diversion channel to keep water  
6 from entering the ponds.

7 THE COURT: The what? I'm sorry.

8 THE WITNESS: It is like a diversion  
9 channel and a decant channel. So as water comes off  
10 the mountain, they want to capture it there so that  
11 it doesn't run into the ponds and then run out the  
12 other side, fill up the ponds and overtop the dams.

13 Q (By Mr. Augustini) Ms. Sitton, were you  
14 here when Mr. Dewey testified regarding the purpose  
15 of those perimeter channels?

16 A. I was.

17 Q. And is that consistent -- is your view  
18 consistent with how he described the use of those  
19 drainage ditches?

20 A. It is.

21 Q. And what is this redline that is hatched  
22 down along there?

23 A. That is a berm. And again, that berm is  
24 constructed to keep water. The mountains to the  
25 west are very steep and there's some drainages that

1 come down towards the ponds. So that dike is  
2 keeping that water from entering those ponds.

3 Q. So I guess, in a general sense, you could  
4 say that a perimeter berm that blocks runoff from  
5 the mountains is related to the use of the  
6 impoundments.

7 Is that what you were getting at earlier  
8 in your testimony this morning?

9 A. Yes.

10 Q. Just as an example, I know you used 3D  
11 viewing software to better appreciate the topography  
12 of the area, correct?

13 A. I do.

14 Q. But you are familiar with the drainages  
15 and can you confirm, essentially, that one of the  
16 main drainages from the mountains comes through like  
17 that?

18 A. It does.

19 Q. Is there another drainage that you can see  
20 and just briefly point out for the Court's reference  
21 to the north?

22 A. To the north? There is one coming down  
23 through here. There is a couple over here.  
24 (Indicating).

25 Q. And the whole idea is, you don't want your

1       **impoundments to be swamped with natural runoff from**  
2       **the mountains, correct?**

3           A.     Correct.

4           Q.     **And if you had to pinpoint the less than**  
5       **1 acre that relates to Pinon 11, can you do that**  
6       **this morning?**

7           A.     I can.

8                   And to explain to the Court how I can do  
9       that, we put these Pinon claim maps into our  
10      geographic information systems database and that way  
11      we can overlay that map over the top of these  
12      photographs.

13                  So that was helpful because then I could  
14      look at the map over the top of the photograph and I  
15      could see where all the Pinon claims were and I  
16      could -- I, you know, look at it in stereo and  
17      identify what was in -- within those claims.

18                  And in Pinon 11, the very southeast corner  
19      of Pinon 11, I don't even know if I could get a  
20      little dot in there -- it is right there.

21                  It scoots into right there. It is less  
22      than an acre. (Indicating).

23           Q.     **And that dot is probably bigger than the**  
24       **actual amount of tailing that you can see within the**  
25       **claim, correct?**

1 A. Yes.

2 Q. And, again, do you recall Chevron was  
3 applying for ownership of the Pinon claims at the  
4 time, correct?

5 A. Correct.

6 Q. Do you remember the date of the patent  
7 issuance with respect to Pinon 11?

8 A. I think it was just prior to this, in  
9 April '81.

10 Q. Okay. So as of this moment, Chevron owns  
11 even that less than 1-acre part that is covered by a  
12 small amount of tailings, correct?

13 A. Yes.

14 Q. How long did Chevron continue operating  
15 these impoundments after 1981?

16 A. I think until they stopped mining in 2014.

17 MR. AUGUSTINI: Mr. Hambrick, please  
18 display CX331, Page 4.

19 Q (By Mr. Augustini) Ms. Sitton, was this the  
20 patent survey that Chevron's counsel discussed with  
21 you earlier this morning?

22 A. Yes.

23 Q. And she pointed to some particular  
24 language that generally described the use of the  
25 Pinon claims, correct?

1 A. Yes.

2 Q. And you mentioned that --

3 MR. AUGUSTINI: Well, let's look at the  
4 bottom of the page, blow that up under "Claim  
5 Development," please.

6 Q (By Mr. Augustini) When you look at what  
7 the use actually was as of this time in the late  
8 1970s, what does CX331 indicate, Ms. Sitton?

9 A. That they -- the initial development began  
10 in 1976. They constructed a retention dike, an  
11 access road, fence, surface runoff, a decant  
12 channel, around the periphery of the enlarged  
13 tailings disposal area.

14 Q. So would all of those things relate,  
15 generally, to the use, specifically the disposal of  
16 tailings that is occurring to the east impoundments?

17 A. Yes.

18 Q. Now, Ms. Sitton, do you know, based on  
19 EPA's record of decision, approximately how much  
20 area will need to be covered with clean soil and  
21 revegetated with respect to the two tailings  
22 impoundments?

23 MS. CRISHAM PELLEGRINI: Objection,  
24 Your Honor. This goes to the environmental issues,  
25 which goes to the environmental issue, which have

1 already been stipulated and it is also beyond the  
2 scope of the cross.

3 THE COURT: Sustained.

4 Q (By Mr. Augustini) Ms. Sitton, do you know  
5 approximately the size of the two impoundments,  
6 based on your review of the aerial photographs?

7 A. Over 700 acres, both of them.

8 THE COURT: 700 acres of the tailing  
9 ponds?

10 THE WITNESS: Both of them, yeah. Uh-huh.

11 MR. AUGUSTINI: No further questions,  
12 Your Honor.

13 THE COURT: Thank you very much.

14 You may step down.

15 (Whereupon, the witness was excused.)

16 THE COURT: You may call your next  
17 witness.

18 MR. HARRISON: Your Honor, the Government  
19 calls Dr. Fredric Quivik.

20 (Whereupon, the witness was sworn.)

21 THE DEPUTY CLERK: Please be seated, and  
22 state and spell your name for the record.

23 THE WITNESS: My name is Fredric Lincoln  
24 Quivik. Last name spelled, Q-U-I-V as in vegetable,  
25 I-K.

1 MR. HARRISON: Good morning, Dr. Quivik.

2 THE WITNESS: Good morning.

3 MR. HARRISON: Did you submit written  
4 testimony in this case?

5 THE WITNESS: I did.

6 MR. HARRISON: Is that still your  
7 testimony today?

8 THE WITNESS: Yes.

9 MR. HARRISON: Do you have any changes to  
10 that testimony?

11 THE WITNESS: No, good.

12 MR. HARRISON: Your Honor, I would like to  
13 offer Dr. Quivik's testimony.

14 THE COURT: Very good. Accepted.

15 (Dr. Frederic Quivik's direct testimony  
16 was prefilled and admitted.)

17 CROSS-EXAMINATION

18 BY MR. TODD:

19 Q. **Good morning, Dr. Quivik. Nice to see you**  
20 **again.**

21 A. Good to see you.

22 MR. TODD: Your Honor, before I start, I  
23 would like to make one note.

24 We are very mindful of your exhortations  
25 to move things along.

1                   THE COURT: You don't have to go very  
2 fast.

3                   MR. TODD: In that spirit, we are mindful  
4 to move things along.

5                   This witness has submitted 99 pages of  
6 narrative testimony, without any breaks, even from  
7 questions, so this may take a little while. But I  
8 do want you to know I was until midnight turning a  
9 100-page outline into a 49-page outline, so I am  
10 trying.

11                  THE COURT: All right.

12                  MR. TODD: Thank you.

13                  Q     (By Mr. Todd) Dr. Quivik, the Government  
14 has tendered you as an expert in industrial history,  
15 correct?

16                  A.    Correct.

17                  Q.    And you have testified in other cases as  
18 an industrial historian, correct?

19                  A.    Yes.

20                  Q.    And you have never been qualified by a  
21 Court to testify as an expert in anything other than  
22 industrial history?

23                  A.    Correct.

24                  Q.    And all of the testimony that you are  
25 offering in this case is as an industrial historian?

1 A. Yes, an expert industrial historian.

2 Q. An expert industrial historian, thank you,  
3 sir.

4 Now, this case involves Federal land use,  
5 mining laws and policy. And you understand that.

6 You are not a lawyer, sir, correct?

7 A. Correct.

8 Q. And you don't hold yourself out as an  
9 expert in Federal land management?

10 A. Correct.

11 Q. You have no prior expertise with mining  
12 claims or anything like that, for example?

13 A. Correct.

14 Q. And you are not an expert in geology?

15 A. Correct.

16 Q. Or in mining or metallurgic or  
17 construction engineering?

18 A. Correct.

19 Q. You are not here offering opinions as an  
20 environmental scientist?

21 A. Correct.

22 Q. Nor as an expert in mineral processing?

23 A. Correct.

24 Q. Now, this case also, as we know from  
25 testimony over the last two days, has to do with

1       **mine finances, correct?**

2           A.     Correct.

3           Q.     **And as to that, you're not an economist?**

4           A.     That is right.

5           Q.     **And you are not an expert in mine finance?**

6           A.     That is right.

7           Q.     **And you have not analyzed the  
8           profitability of the Questa Mine?**

9           A.     Correct.

10          Q.     **You have made no analysis of Molycorp's  
11           ability to borrow funds or access capital markets at  
12           any particular point in time?**

13          A.     I have read the history of those things  
14          but I have not performed an expert analysis of them.

15          Q.     **And you have, likewise, made no analysis  
16           of the capital resources available to Molycorp at  
17           any particular point in time, including from other  
18           mines or facilities that Molycorp may have owned?**

19          A.     Again, I've read the history of those but  
20          I've not conducted an analysis as a finance expert.

21          Q.     **And you have undertaken no study of  
22           molybdenum markets, molybdenum prices or molybdenum  
23           sales at any particular point in time?**

24          A.     Correct.

25          Q.     **And specifically, you haven't analyzed**

1       **Molycorp's molybdenum sales?**

2           A.     Correct.

3           Q.     **And you performed no expert analysis?**

4           A.     Correct.

5           Q.     **Okay. At the end of this case, we are all**  
6       **going to forget how to pronounce molybdenum.**

7                   **And lastly, Doctor, you have made no study**  
8       **of the economic effects or benefits of the Questa**  
9       **Mine and you're offering no such opinions here**  
10      **today, correct?**

11          A.     Correct.

12          Q.     **Now, let's start off --**

13          A.     I might add, if I may --

14          Q.     **Sure.**

15          A.     -- especially at the front end of that  
16       list of professions in which I am not an expert, I  
17       am an expert in the history of those kinds of  
18       activities.

19                   The legal environment that mining  
20       companies operated in, mining engineering,  
21       metallurgic engineering, but I don't hold myself out  
22       as an attorney, for instance.

23          Q.     **And you made that clear in your direct**  
24       **testimony, and I appreciate that.**

25                   **Now, in your direct testimony, you discuss**

1     Federal land use law, and we've heard about some of  
2     that with Mr. Fredley.

3                     In your direct testimony, you opine that  
4     you see no evidence that the Federal Government  
5     assisted or contributed to the development of the  
6     Questa Mine; is that generally correct?

7     A.     As a direct participant, yes.

8     Q.     Now, in your testimony, you do discuss the  
9     Federal mining laws and, in particular, the Mining  
10   Act of 1872, correct?

11    A.     Yes.

12    Q.     And that law allowed persons to enter  
13    Federal land, stake claims, explore valuable  
14    minerals, extract those minerals, sell them for a  
15    profit, and if the statutory conditions are met,  
16    convert that land to their own private ownership,  
17    right?

18    A.     Correct.

19    Q.     Now, the U.S. laws are not compelled to  
20    open mineral lands for Federal exploration in this  
21    manner.

22                     It chose to do that, right?

23    A.     That was a decision by Congress.

24    Q.     And since the mining law of 1872, Congress  
25    has, from time to time, withdrawn some public lands

1       from the kind of mineral entry I just described,  
2       right?

3           A.     Correct.

4           Q.     It created National Parks, Yellowstone,  
5       Yosemite, right?

6           A.     Yes.

7           Q.     And it has closed and preserved wilderness  
8       areas?

9           A.     Yes.

10          Q.     It included some right around the Questa  
11       Mine, right?

12          A.     Yes.

13          Q.     And the Wilderness Act of 1964, as we have  
14       discussed previously, gave holders of unpatented  
15       mining claims a grace period of, I want to say it  
16       was 20 years to make a discovery or forfeit their  
17       claim, right?

18          A.     Yes. Recognizing that had the Government  
19       tried to nullify those claims immediately, that  
20       would qualify as a taking.

21          Q.     So instead, it nullified them 20 years  
22       later?

23          A.     Gave the mining companies or the holders  
24       of those claims, a good faith time period to see  
25       whether they actually were mineralized or not.

1           Q.     Now, despite being able to withdraw land  
2     or make them wilderness areas and such, Congress  
3     did, as we know from this case, open many Federal  
4     lands, including the land at Questa, for exploration  
5     and development for resources, such as molybdenum,  
6     correct?

7           A.     Yes, metals generally.

8           Q.     And in your view, Doctor, the  
9     United States allowed individuals and companies an  
10    exclusive and practically unfettered right to  
11    explore, develop and operate mines on Federal land.

12           That is your view, right?

13           A.     Yes. As long as they obeyed State, Local  
14    and Federal laws, yes.

15           Q.     Now, a mine claimant can extract and sell  
16    minerals from an unpatented mining claim, which is  
17    land still owned by the Federal Government, without  
18    paying royalties to the Government, right?

19           A.     Correct.

20           Q.     And the United States erected this  
21    structure purposefully to incentivize and encourage  
22    the exploration and prompt development of mineral  
23    resources on Federal land, right?

24           A.     Recognizing that the Government did not  
25    want to be in the mining business itself and owning

1 the resources, which was the practice in most other  
2 countries.

3 Q. **So that is a yes, right?**

4 A. That is a yes, yes. Decided to put this  
5 whole industry in private hands.

6 Q. **And so through the procedures and**  
7 **protections, that we've discussed, established under**  
8 **the mining laws, the Government facilitated mining**  
9 **activity.**

10 A. In that it created a legal structure in  
11 which private mining activity could take place, yes.

12 Q. **Which, in turn, facilitated that mining**  
13 **activity.**

14 A. Yes, as I said.

15 Q. **And it did so in order to make resources**  
16 **on Federal land available to the public for economic**  
17 **development, correct?**

18 A. Yes, the economic development of the  
19 nation.

20 Q. **And, in fact, it's been the policy, and**  
21 **you just said this, in other words, it's been the**  
22 **policy of the U.S. to encourage the development of**  
23 **Federal mineral lands to put those lands and**  
24 **minerals to use.**

25 A. I think a more accurate way of saying it

1       would be that it was the policy of the Government to  
2       put the mining industry in private hands. And  
3       recognizing that the Government did not want to do  
4       all of the survey work to figure out where the  
5       mineral lands were, it would leave that task to  
6       private parties, as well, and make the public domain  
7       and, in time, National Forests available to private  
8       parties to discover minerals, and if they found  
9       minerals, to put those mineral lands in private  
10      hands.

11           **Q.       But you would agree it has been the policy**  
12           **of the U.S. to encourage the development of Federal**  
13           **mineral lands?**

14           A.       To encourage a private mining industry.

15           Q.       And you would further agree, I think, that  
16       historically it was the policy of the Government to  
17       interfere as little as possible in the conduct of  
18       miners, as they explored, developed and exploited  
19       these mineral lands, right?

20           A.       Correct.

21           Q.       Now, these laws that we have discussed, as  
22       a general matter, protected Molycorp and the Questa  
23       site as it developed, right?

24           A.       Yes.

25           Q.       You are not aware of any substantial

1       mining work at the Questa site before the claim --  
2       before the claims were located under the mining  
3       laws?

4           A.       I am not.

5           Q.       And, in fact, you have never heard of  
6       anyone developing a molybdenum mine without the  
7       protections of the Federal mining laws?

8           A.       I have not, in the United States.

9           Q.       Now, you would agree, Doctor, I believe  
10       that mining companies, such as Molycorp, are more  
11       likely to invest in developing a site, such as  
12       Questa, with the protections afforded by the Federal  
13       mining laws, right?

14                   More likely with them than without them.

15           A.       Yes, I understand from talking with people  
16       in the mining industry that they generally like to  
17       invest in mining enterprises in the United States  
18       because the legal infrastructure here makes that  
19       much less risky than in some other countries.

20                   So I think the United States has worked at  
21       trying to create that legal infrastructure, yes.

22           Q.       All right. I think you are right.

23                   And, in fact, would it be fair to say that  
24       the mining laws were pivotal to Molycorp's  
25       operations?

1           A.     Well, Molycorp operated within the  
2     United States, and the United States created that  
3     legal structure. And so it would be like saying the  
4     traffic laws of my city are pivotal for my being  
5     able to drive around the streets of the city.

6           Q.     **Doctor, there can be a law on the books**  
7     **that applies to a company but it is not really**  
8     **pivotal it to that company's operation in an**  
9     **existential way. I want to push you on that a**  
10    **little bit.**

11           **Would you agree that the mining laws were**  
12     **pivotal in an existential way to the development of**  
13     **the Questa Mine?**

14           A.     In the sense that the whole legal  
15     infrastructure of our country is pivotal to what we  
16     all do, day in and day out, if we are a law-abiding  
17     citizen.

18           Q.     **That is a bit of a duck, Dr. Quivik.**

19           A.     I am trying to get at, understand what you  
20     mean by pivotal.

21           Q.     **Let's put it a different way.**

22           A.     I don't think it is in any way  
23     extraordinary or distinctive.

24           Q.     **Okay.**

25           MR. TODD: Could we pull up Paragraph 84

1 of Dr. Quivik's direct testimony, please.

2 Q (By Mr. Todd) Your sworn testimony in this  
3 case, Doctor, is that Molycorp's unpatented mining  
4 claims and mill sites, which of course were located  
5 under the mining laws, right, were pivotal to its  
6 operation, and Molycorp paid close attention to  
7 locating and maintaining these claims.

8 You agree with that statement, right?

9 A. Yes.

10 Q. Okay. Now, the mining laws of 1872 is the  
11 only Federal statute that incentivizes mining,  
12 right?

13 A. There have been a variety of statutes that  
14 have, in one way or another, addressed the mining  
15 industry, yes.

16 Q. You are familiar with the Defense  
17 Production Act of 1950?

18 A. Yes.

19 Q. And Congress has, as we have heard  
20 yesterday, enacted that at the outbreak of the  
21 Korean War, shortly after World War II, to remediate  
22 supply uncertainties that the nation suffered during  
23 World War II, fair?

24 A. Fair.

25 Q. The Defense Production Act was intended to

1       increase the supply and diversify the supply base  
2       for various critical and strategic minerals, right?

3           A.       Yes.

4           Q.       So two things there, both increase the  
5       amount of stuff and also diversify the supply base,  
6       which are slightly different, right?

7           A.       Yes. And in the program we are talking  
8       about, indirectly, through fostering exploration.

9           Q.       Right. And the Defense Production Act  
10      created the Defense Minerals Exploration Agency,  
11      DMEA, which in turn made loans to partially fund  
12      mining activities, right?

13        A.       Yes.

14        Q.       Okay.

15        A.       No, to partially fund exploration  
16      activities.

17        Q.       Exploration activities. Thank you,  
18      Doctor.

19           And now, DMEA loans -- obviously, we have  
20      heard a lot of talk in the last two days about it,  
21      DMEA loans.

22           You would agree, Doctor, they are not like  
23      an ordinary bank loan, are they?

24        A.       No.

25        Q.       In fact, they are significantly more

1 favorable to the borrower than the ordinary bank  
2 loan, right?

3 A. Yes.

4 Q. They were interest free?

5 A. Yes.

6 Q. They did not necessarily have to be  
7 repaid?

8 A. Correct.

9 Q. And even if a discovery was made, the  
10 borrower did not -- if the borrower did not develop  
11 the discovery within ten years, the loan didn't have  
12 to be repaid, right?

13 A. Correct.

14 Q. In fact, a borrower had to repay the  
15 principal only if a discovery was made and developed  
16 within ten years and the borrower recovered and sold  
17 some ore, in which case royalties would be paid from  
18 the proceeds, right?

19 A. Yes, from the property that was explored.

20 Q. From the discovery.

21 A. No, from the property that was explored.

22 Q. Okay. And the DMEA or Congress, when it  
23 set up this program, and the DMEA, in turn, did not  
24 insist on repayment at the point of discovery was  
25 made, in order to avoid discouraging some potential

1       **borrowers, right?**

2           A.     Yes. I think mining companies would have  
3     been reluctant to enter in an agreement that  
4     requires them to start mining immediately because  
5     there are lots of factors that would determine  
6     whether they would want to actually embark on a  
7     mining project.

8           Q.     Right. They might make a discovery but  
9     not have the capital on hand to develop it  
10   immediately.

11          A.     Or they might, but the market conditions  
12     might not be what they would like to see. They  
13     might not have the technology in hand to do that. A  
14     number of factors.

15          Q.     Right.

16           Because, as we have discussed and, as I  
17     know you know, whether something constitutes ore in  
18     a technical sense depends on whether it is  
19     commercially valuable. And so it can change with  
20     market fluctuation, right?

21          A.     Can be produced at a profit.

22          Q.     Okay. And so DMEA structured its loans in  
23     a way to make them more attractive to potential  
24     borrowers?

25          A.     In the mining industry, I think that is

1 fair to say.

2 Q. Yeah.

3 And given all this, this made a DMEA loan  
4 a much less risky proposition for the borrower than  
5 a bank loan would have been?

6 A. Yes.

7 Q. The risk of the loan, the possibility that  
8 it did not result in a discovery, that fell entirely  
9 on the United States, right?

10 A. Yes.

11 Q. And the Government offered these favorable  
12 loans to incentivize mining companies to explore for  
13 additional critical or strategic mineral resources,  
14 right?

15 A. Yes.

16 Q. Now, as we have discussed, Molycorp  
17 applied for and received a DMEA loan, which did, in  
18 fact, result in the development -- in the discovery  
19 and development of a mineral resource, right?

20 A. Yes.

21 Q. So in this instance, at least, the DMEA  
22 achieved its purpose?

23 A. I should say indirectly resulted in the  
24 development of a mineral resource, but yes, there  
25 was a chain of events that followed.

1           Q.     Okay.  Let's change and focus in a little  
2 more on mining claims, under the mining laws that we  
3 discussed a few minutes ago.

4           The Government argues, and I am going to  
5 paraphrase here, tell me if I'm misunderstanding the  
6 case, but the Government asserts, basically, that  
7 once Molycorp located unpatented mining claims,  
8 which could include mill site claims, the Government  
9 was essentially powerless to exercise any authority  
10 over those lands to inhibit or control or direct the  
11 creation or placement of mining waste; is that a  
12 fair assessment?

13          A.     That -- I don't want to speak for the  
14 Government, but I think that characterizes my view,  
15 and that is my view based on reading of the  
16 understanding of mining companies in the period,  
17 Federal officials in the period, Mr. Lindley, whom  
18 we heard about in previous testimony, Mr. Fredley's  
19 testimony, so, yes.

20          Q.     Since you're in the box, I will gladly  
21 take your view and work with that.  Okay, sir?

22          A.     Okay.

23          Q.     Now, yesterday, with Mr. Fredley, we did  
24 hear the term paramount proprietor used to describe  
25 the Government's relationship with Federal lands.

1                   **You are familiar with that term?**

2           A.       Yes.

3           Q.       And you don't disagree with -- putting  
4       aside any question of what specific powers the  
5       Government has, you don't disagree that at the end  
6       of the day the United States continues to own land  
7       on which there have been located unpatented mining  
8       claims?

9           A.       Well, since we are talking about details  
10      here, I think it would be more accurate to say that  
11      the Government holds the title, but the mining or --  
12      the mining claimholder owns virtually all of the  
13      other rights, and those are property rights, and the  
14      claimholder owns all of those rights.

15          Q.       **Okay.**

16          A.       The only thing left in the Government's  
17      hands is the title.

18          Q.       **So your testimony is that with respect to**  
19       **land, on which there are unpatented mining claims,**  
20       **the Federal Government continues to hold the title**  
21       **to that land?**

22          A.       Yes.

23          Q.       **Okay. Now, an unpatented mining claim**  
24       **does not give fee simple-type ownership to a**  
25       **claimholder, does it?**

1           A.     Correct. The Government holds the title.

2     The claimholder owns virtually everything else.

3           Q.     **And an unpatented claimholder's rights are**  
4     **contingent on the performance of certain tasks,**  
5     **right?**

6           A.     If the claimholder wants to obtain a  
7     patent and eventually obtain title to that land,  
8     there is a series of steps that the law requires the  
9     claimholder to go to, to eventually get title, yes.

10          Q.     **A claimholder has to pay an annual fee?**

11          A.     No, the claimholder has to pay -- perform  
12     what is called assessment work, spend \$100 a year on  
13     exploration and development of the claim.

14          Q.     **You don't understand that there has ever**  
15     **been a requirement that a claimholder pay an annual**  
16     **fee?**

17          A.     I don't recall that in the law, no.

18          Q.     **Okay. But as you have mentioned, a**  
19     **claimholder does have to spend a certain amount of**  
20     **money annually actively working and developing the**  
21     **claim?**

22          A.     Yes, and be able to document that.

23          Q.     **Okay. And if they don't actively work the**  
24     **claim, the unpatented mining claim can be**  
25     **invalidated, correct?**

1 A. Correct.

2 Q. And in that instance, whatever rights the  
3 claimholder holds, would revert back to the U.S.,  
4 right?

5 A. Yes.

6 Q. And you understand, Doctor, that one of  
7 the key aspects of the bundle of property rights  
8 that every first-year law student learns about, is  
9 the right to exclude others?

10 THE COURT: Right to what? I'm sorry.

11 MR. TODD: The right to exclude others.

12 A. Yes.

13 Q (By Mr. Todd) A holder of an unpatented  
14 mining claim does not have a general right to  
15 exclude others from the land, do they?

16 A. Are we talking about mining claims in the  
17 public domain or mining claims in National Forest?

18 Q. Well, if you think the answer is  
19 different, I will take the answer for both.

20 A. In the National Forests, there is a limit  
21 to which a claimholder has rights to that parcel of  
22 land. It has rights only for the purposes of  
23 exploring, developing and mining minerals.

24 And so if this is a National Forest and  
25 there are trees growing on the mining claim, the

1 claimholder can cut trees, if the claimholder is  
2 going to use those trees in furthering its mining  
3 operation, but it could not cut trees for commercial  
4 purposes, for instance.

5 Q. **And in this case we are in a National**  
6 **Forest, right?**

7 A. Yes.

8 Q. **So let's stick with that answer.**

9 **And so, no general right to exclude and no**  
10 **unlimited use of surface forests, right?**

11 A. Can you repeat the question?

12 Q. **Let me break them out.**

13 **The question I had asked you originally**  
14 **was whether the holder of an unpatented mining claim**  
15 **has a general right to exclude others from that**  
16 **claim.**

17 **And if I understand your answer correctly,**  
18 **you said in a National Forest an unpatented mining**  
19 **claimholder's rights to exclude is limited.**

20 **I think that is what you said.**

21 A. I am trying to think through that because  
22 there are a lot of different ways of excluding. For  
23 instance, the holder of the claim can exclude other  
24 people who might want to come on to the claim and  
25 explore or develop a mine. And --

1           Q.     Because the holder -- sorry to  
2     interrupt -- the holder of the claim has an exclusive  
3     use of that land for mining purposes?

4           A.     Yes.

5           Q.     Okay.

6           A.     And if the exploration and development had  
7     reached the point at which the mining -- the miner  
8     had a lot of improvements on the site, I can  
9     imagine -- I haven't seen these details spelled out  
10    anywhere, but I can imagine, for practical purposes,  
11    that the miner could put a fence around that  
12    property and exclude others, even if they weren't  
13    intent on trying to be a claim jumper.

14          Q.     We discussed this at your deposition that  
15    building a fence around a big open pit would be a  
16    good safety idea, right?

17          A.     Yes.

18          Q.     And that is why I asked the question, as I  
19    did, that there isn't a general right to exclude.  
20    There may be some specific bases to exclude, such as  
21    for mining purposes, but not a general right to  
22    exclude.

23                   Like no one can come up on this mining  
24    claim at all.

25          A.     Well, it would be pretty much up to the

1 claimholder to decide that, I think.

2 Q. Okay. And the other aspect of your  
3 answer, when I confused you with my long, rambling  
4 question, that you mentioned timber.

5 And to draw that out, an unpatented mining  
6 claimholder can't harvest the surface timber and  
7 sell it commercially but they can use timber on the  
8 claim to support their mining, right, such as  
9 timbering a mineshaft?

10 A. Yes.

11 Q. But the United States can enter land where  
12 there is an unpatented mining claim, harvest the  
13 timber and sell it commercially, right?

14 A. In a National Forest, yes. That is what  
15 the Forest Service was established to do, is to  
16 manage those resources, the surface resources.

17 Q. And the holder of an unpatented mining  
18 claim can't operate a business other than a mine.  
19 For example, cannot operate a livestock grazing  
20 business or a saloon that is unrelated to the mining  
21 activity, right?

22 A. Correct.

23 Q. But someone who owned that land in fee  
24 simple could do these things as long as they are  
25 consistent with State zoning law, right?

1 A. Yes.

2 Q. And you would agree, Doctor, I think, that  
3 even mining activity on unpatented mining claims is  
4 subject to reasonable regulation by the Federal  
5 Government?

6 A. If the Federal Government passes laws or  
7 establishes regulations that regulate industry, then  
8 I think a mining operation would qualify as the kind  
9 of industry that is being regulated by the  
10 Government.

11 Q. Okay. And that is fair, laws generally  
12 apply to mining operations.

13 But you are familiar with the Organic Act  
14 of 1897, are you not?

15 A. Yes.

16 Q. And that is the Act which created and  
17 established what ultimately became the U.S. Forest  
18 Service?

19 A. Yes.

20 Q. And the Organic Act provides that the  
21 rights of persons to locate mining claims on forest  
22 lands should not be unreasonably burdened, right?

23 A. Correct.

24 Q. And so the converse of that, as you agreed  
25 with me at your deposition, is that mining claim

1       **activities on Federal lands -- sorry -- mining**  
2       **activities on Federal lands may be reasonably**  
3       **burdened?**

4           A.       That would be the implication.

5           Q.       **And the Forest Service has, in fact,**  
6       **issued regulations regulating and restricting mining**  
7       **activities on Federal forest lands, right?**

8           A.       Over time, yes.

9                   MR. TODD:   So let's look at U.S.  
10                  Exhibit 276, please. Could we pull that up, Patty?

11               Q       **(By Mr. Todd) Do you see the document on**  
12       **the screen in front of you, sir?**

13               A.       Yes.

14               Q.       **Have you had a chance to review this**  
15       **letter? Do you recognize this document?**

16               A.       I see the date and that it is addressed to  
17       Molycorp, but I don't know who it is from and I have  
18       not seen enough yet to know what this one is about.

19                   MR. TODD:   Patty, let's go to the end of  
20       the next page.

21               Q       **(By Mr. Todd) Doctor, do you see the**  
22       **letterhead at the top, it is from the Forest Service**  
23       **and the Department of Agriculture?**

24               A.       Yes, the local ranger station.

25               Q.       **Which is right down the road from the**

1       mine.

2           A.     Correct.

3           Q.     It is dated January 12, 1973?

4           A.     Right.

5           Q.     Which was right in the middle or towards  
6     the end of the four years it took to consummate the  
7     land exchange?

8           A.     Correct.

9                    MR. TODD: And if we flip to the next  
10    page, Patty, or the very end of the letter.

11           Q     (By Mr. Todd) We will see it is from John  
12    S. Hart, District Forest Ranger.

13                    Do you see that?

14           A.     Yes.

15           Q.     And Mr. Dewey spoke about knowing Mr. Hart  
16     and the good relationship the mine had with him.

17                    Do you recall that testimony?

18           A.     Yes.

19                    MR. TODD: Let's go back to the first  
20    page.

21           Q     (By Mr. Todd) And, Doctor, I am perfectly  
22     happy that, as you said, you have not reviewed this.  
23     I am perfectly happy to let you read it, if you  
24     would like.

25                    If you just direct Patty, over here, she

1 can scroll it for you.

2 A. Okay. You can scroll down a little bit  
3 more.

4 You can continue.

5 Okay. Can we continue that sentence to  
6 the next page, please? Okay.

7 Okay. All right. Thank you.

8 Q. **Thank you, Doctor.**

9 I don't usually have people read entire  
10 documents on the stand but as you said, you have not  
11 seen that before.

12 A. I have seen this before.

13 Q. **Oh, okay. I thought you said you hadn't.**

14 A. I just couldn't see by the title and  
15 wanted to be reminded of what the whole letter was  
16 about.

17 Q. **Fair.**

18 Dr. Quivik, in this letter, you would  
19 agree, that the Forest Service told Molycorp that  
20 from then forward it would have to get a special use  
21 permit from the Service anytime it wanted to cut an  
22 access road or to drill on an unpatented mining  
23 claim?

24 A. Yes.

25 Q. Okay. And it references Federal

1 regulations that were adopted to institute that  
2 requirement?

3 A. Yes.

4 Q. Do you happen to know what legal authority  
5 the Forest Service cited for those regulations?

6 It is not in the letter. I was wondering  
7 if you knew.

8 A. Okay. I don't. I -- this is in the early  
9 '70s, right when a lot of environmental regulations  
10 were beginning to be developed by various Federal  
11 agencies, and so it is not at all surprising to see  
12 that the Forest Service is going to take greater  
13 interest in administering its surface resources.

14 And building access roads would be part of  
15 that administrative mandate for the Forest Service,  
16 under the Organic Act, of course, 1897, yeah.

17 Q. Would it surprise you if that was the  
18 authority the Forest Service cited?

19 A. No.

20 Q. And this letter sets out the process for  
21 applying for a special use permit and whether or not  
22 one would be approved?

23 A. Yes.

24 Q. And so under this regulation, the Forest  
25 Service officials would be reviewing Molycorp's

1 proposed activities anytime it wanted to cut an  
2 access road or drill on one of its own unpatented  
3 mining claims?

4 A. Yes.

5 Q. And special use permits, as you know, can  
6 sometimes take months, if not years, to issue,  
7 right?

8 A. Yes.

9 MR. TODD: Your Honor, I move to admit  
10 USX276.

11 THE COURT: Any objections?

12 MR. HARRISON: No objections.

13 (Exhibit admitted, USX276.)

14 Q (By Mr. Todd) The following year, the  
15 Forest Service issued regulations, much more  
16 expansive regulations, that required mines operating  
17 in Federal forests to submit a plan of operations  
18 for Forest Service approval, right?

19 A. Yes.

20 Q. And a plan of operations had to detail the  
21 entire operation, including the steps it would take  
22 for environmental protection, which would include  
23 waste deposition, right?

24 A. I don't recall waste deposition being  
25 named in that statute. I do know that it was for

1      purposes of allowing the Forest Service to assess  
2      how the mining activity would impact the resources  
3      that the Forest Service was administering, the  
4      surface resources.

5                And it was very clear that the purpose was  
6      not to tell the mining companies how to conduct  
7      their mining activities.

8                Q.     **But part of a mining claim -- and we can**  
9      **pull up the regulation if we need to -- but it does**  
10     **specifically require the mine to submit an**  
11     **environmental plan, the steps they will take for**  
12     **environmental protection?**

13              A.     I believe that is the language, yes.

14                Focused on the surface environment that  
15      the Forest Service was administering.

16                Q.     **And in order to operate at all, a mine**  
17      **needed to have a Forest Service approved plan or a**  
18      **Forest Service approved dispensation from the**  
19      **requirement to have a plan, right?**

20              A.     Correct.

21                Q.     **And as you know Federal agencies must**  
22      **identify when they promulgated regulations, must**  
23      **identify the statutory authority that empowers them**  
24      **to issue those regulations, right?**

25              A.     Yes.

1           Q.     And you know, Doctor, that for those 1974  
2 regulations, the one statute the Forest Service  
3 invoked was the Organic Act of 1897, right?

4           A.     Yes.

5           Q.     Now, let's shift gears and shift  
6 locations. Let's go underground.

7                   There is a disagreement in this case,  
8 Dr. Quivik, about who was using what to explore for  
9 what way -- that was a mouthful.

10                  But you understand there have been  
11 competing views as to when Molycorp was using  
12 diamond drilling and when it was exploring for  
13 low-grade ore, right?

14                  A.     I wouldn't have thought there was a  
15 disagreement but if you point it out to me, we can  
16 dig into it.

17                  Q.     You sat in the courtroom, you haven't  
18 heard witnesses and lawyers sparring over when  
19 diamond drilling was used and when low-grade ore was  
20 searched for?

21                  A.     Yeah, I know what you are referring to.

22                  Q.     Okay. Now, let me start with some things  
23 I think we will all agree on, and that is with the  
24 original underground mine, just a few questions  
25 around that.

1           There is no dispute, is there, that  
2    Molycorp used drifting and crosscutting, tunneling  
3    methods in the original underground mine to mine ore  
4    and to explore for ore?

5           A.     That is correct.

6           Q.     And we know that the original underground  
7    mine did not use diamond drilling to explore for  
8    ore?

9           A.     Correct.

10          Q.     In fact, we know from an article that he  
11    wrote in the 1930s, that Mr. J.B. Carman, the  
12    manager of the mine, felt that diamond drilling was  
13    an untrustworthy means of searching for high-grade  
14    ore?

15          A.     Correct.

16          Q.     Then we come to the 1954 to 1956 period,  
17    and this is the dispute that I referenced a few  
18    minutes ago, the Government contends that Molycorp  
19    was searching for low-grade ore, using diamond  
20    drilling during that period, and they pointed to  
21    some documents and Chevron's witnesses have taken  
22    the position that Molycorp was not searching for  
23    low-grade ore and was not using diamond drilling in  
24    those years. And we have pointed to some documents.

25                   And you have seen all of them?

1 A. Yes.

2 Q. You are the historian, and I am hoping  
3 that you can clear this up for us.

4 Dr. Quivik, you agree, do you not, with  
5 Chevron's position that from 1954 to 1956 Molycorp  
6 was searching for more veins of high-grade ore and  
7 not for a large low-grade ore body, correct?

8 A. Correct.

9 Q. And you also agree that, during those  
10 years, Molycorp was still using the same mining  
11 techniques it had used in the original underground  
12 mine drifts and crosscutting?

13 A. Yes.

14 Q. Dr. Rigby testified yesterday about how a  
15 mining company searches for a low-grade ore body  
16 drifting and crosscutting horizontally, drilling  
17 vertically and defining in three dimensions a large  
18 block, right?

19 A. That it can analyze based on samples taken  
20 from throughout that three-dimensional block, yes.

21 Q. Precisely. You take the core samples from  
22 the drills, you take the channel samples or the knot  
23 samples from the tunnels, you assay them and then  
24 you can track the increasing or decreasing  
25 concentration of the mineral interest as it moves

1     throughout that block, right?

2           A.     Yes.

3           Q.     Okay. And that then allows a mining  
4     company to, while it may not be perfect, but to  
5     understand, based on an estimate of the size of that  
6     block, they can estimate the size of the ore in that  
7     block?

8           A.     Yes. The volume of the ore, yeah.

9           Q.     The volume of the ore.

10           And if the grade is sufficient, they can  
11     determine, by grade, I mean how high the percentage  
12     is of the mineral of interest.

13           And based on the market price, at the  
14     time, as we discussed earlier, they can determine  
15     whether there is commercially-viable ore right in  
16     the formal technical sense of ore?

17           A.     Well, in the original exploration, they  
18     wouldn't determine that definitively. They would  
19     have a vague understanding of that block, and it  
20     might suggest that it merits more intensive  
21     exploration but they wouldn't have determined  
22     immediately that the whole block qualified as ore  
23     because there is too much space between the various  
24     drill holes.

25           Q.     That is a question of time and effort,

1 right?

2 The process I just described might take  
3 place over a few months or over a space of years,  
4 and at a point in time, with enough crosscutting,  
5 drifting, tunneling or drilling, sampling and  
6 assaying, you can get to the point that you can get  
7 to the point of having reserves, right?

8 A. Yes.

9 Q. And by proving reserves, a mining company  
10 will improve its access to investment capital or  
11 bank lending?

12 A. Correct.

13 Q. Now, in your testimony, Doctor, you cited  
14 the 1964 SEC filing that the Government has showed a  
15 number of times, that is USX003?

16 A. Yes.

17 Q. Right.

18 Now that document wasn't in either of your  
19 reports, right?

20 A. I don't recall that it was, correct.

21 Q. And you didn't mention that at your  
22 deposition?

23 A. Again, that is my recollection. I hope  
24 you're not setting me up for perjuring myself.

25 Q. Absolutely not.

1 A. Okay.

2 Q. I will represent to you that you discussed  
3 it for the first time in your report.

4 A. Thank you.

5 Q. The Government has cited that document for  
6 its contention, contrary to your testimony, that  
7 there was drilling and exploration at Questa in '54.

8 You have heard that, right?

9 MR. HARRISON: Objection, Your Honor.

10 That misstates prior testimony.

11 THE COURT: The record will speak for  
12 itself.

13 Q (By Mr. Todd) The Government has also  
14 shown -- I will move on from that document.

15 The Government has also shown an article,  
16 which is CX186, which is written by Mr. Robert  
17 Carpenter in 1968.

18 Do you recall that?

19 A. Yes.

20 Q. Okay. Would you agree with me that in  
21 1956 Mr. Carpenter shared the view of Mr. Carman,  
22 who I mentioned earlier, that the appropriate method  
23 of exploration at Questa was drifting and  
24 crosscutting, looking for high-grade ore as opposed  
25 to looking for low-grade ore?

1           A.     He was certainly on board with the idea of  
2     looking for high-grade ore.  He also mentioned that  
3     there were indications of this low-grade material,  
4     so I don't recall that he actually stated it in an  
5     either/or kind of proposition but he was on board  
6     with the idea of looking for high-grade material.

7           Q.     **Now, Molycorp applied for a DMEA loan in**  
8     **December of 1956, correct?**

9           A.     Correct.

10          Q.     **And in your 99 pages of narrative**  
11     **uninterrupted written testimony, by my count you**  
12     **devoted about five paragraphs to the period from**  
13     **1957 to 1960.**

14          A.     If that is your count, I will go with it.

15          Q.     **It flew by.**

16            MR. HARRISON:  Objection, Your Honor.  I'd  
17     move to strike.

18            THE COURT:  State your objection.

19            MR. AUGUSTINI:  Your Honor, the commentary  
20     is not necessary.

21            THE COURT:  Overruled.

22          Q     **(By Mr. Todd) It is your view, is it not,**  
23     **Doctor, that the United States Government, the DMEA**  
24     **here, exercised no control whatsoever over the**  
25     **DMEA-funded exploration process; is that right?**

1           A.     In my understanding of the word,  
2     "control," yes.

3           Q.     Okay. I would like to talk through the  
4     DMEA loan process generally, and we will do that  
5     pretty quickly, and then we will talk about the  
6     Molycorp loan specifically, okay?

7           A.     Okay.

8           Q.     The DMEA loan process began with the  
9     submission of an application by the company seeking  
10    to borrow money, right?

11          A.     Right.

12          Q.     In which they would describe the proposed  
13    project?

14          A.     Yes.

15          Q.     These applications were then reviewed by  
16    DMEA officials, which included mining engineers and  
17    geologists, right?

18          A.     Correct.

19          Q.     Now, to clarify for His Honor, who may not  
20    be as familiar with the DMEA as you are, yesterday  
21    there was mention of various other Government  
22    agencies.

23                   Am I correct in understanding that the  
24    DMEA had mining engineers and geologists who were  
25    succumbered from, or double-hatted, from the Bureau

1       of Mines and the U.S. Geological Survey?

2           A.     That is right.

3           Q.     Okay.

4                   MR. TODD: So that is why we were mixing  
5       other agencies, Your Honor.

6           Q     (By Mr. Todd) So these applications,

7       Dr. Quivik, they were assessed on paper and  
8       sometimes on the ground by a field team?

9           A.     Yes.

10          Q.     And a field team, if one was involved,  
11       would assess the applicant's capabilities, the  
12       terrain, the geology, and generally, the conditions  
13       on the ground, right?

14          A.     Yes.

15          Q.     And if the Government was interested, the  
16       parties would then negotiate a contract?

17          A.     Correct.

18          Q.     And the Government, in those contracts,  
19       would specify the work at some level of detail in  
20       order to ensure that the company used reasonable and  
21       appropriate methods to conduct the exploration?

22          A.     The work was specified in the contract and  
23       the work was also proposed by the applicant, so  
24       there was this negotiation but the work was proposed  
25       by the applicants and documented in the contract.

1           Q.     And we saw that negotiation in this case,  
2     right?

3           A.     Yes.

4           Q.     And what the parties, both would have to  
5     agree it's the contract, right?

6           A.     Correct.

7           Q.     And the details would be written down, in  
8     some level of detail, and then that is what the  
9     Government was going to fund?

10          A.     And that is what Molycorp was going to do.

11          Q.     Precisely.

12                 And we heard yesterday from Dr. Rigby and  
13     I think from some other witnesses, that under the  
14     DMEA program, Government engineers and geologists  
15     would also supply substantial technical assistance  
16     and advice, free of charge, to the operators.

17                 You're familiar with that, right?

18          A.     Yes.

19          Q.     So a company borrowing money from the  
20     DMEA, as we discussed earlier, could get a loan on  
21     really good terms and free technical advice?

22          A.     Yes.

23          Q.     And DMEA contracts provided that at the  
24     end of a project, if a discovery was made, the  
25     Government could certify that discovery, right?

1           A.     Yes.  And it's important to remember that  
2     the certification was for the Government's use only.  
3     It was a public document, so a mining company could  
4     use it for its purposes but the reason the  
5     certification step is in there is for the  
6     Government's purposes.

7           Q.     That is interesting.

8                   And we discussed earlier the obligation to  
9     repay a loan and that was triggered by a  
10   certification?

11          A.     Could you repeat the question, please?

12          Q.     I nailed it.  Let me try it again.

13                   Certification of a discovery, under the  
14     contract, would trigger a borrower's obligation to  
15     repay a loan through royalty payments, if there was  
16     a development of a discovery?

17          A.     Yes, it was the first step in the  
18     triggering a two-step triggering process.

19          Q.     And as we discussed earlier, royalties  
20     would then be paid from the land?

21          A.     Yes.  From revenue generated by producing  
22     from the land, yeah.

23          Q.     Thank you.  You are much more specific  
24     than I am.  I appreciate that.

25                   MR. TODD:  Your Honor, we are a few

1 minutes before 10:30. If you want to take a break  
2 now, I have a natural stopping point.

3 THE COURT: We can take a break now. It  
4 will be our morning break. That will be about 15  
5 minutes, so that will be about 24 minutes before 11.

6 MR. TODD: Thank you, Your Honor.

7 (A recess was taken.)

8 THE COURT: You may be seated.

9 You may proceed.

10 MR. TODD: Thank you, Your Honor.

11 Q. (By Mr. Todd) Dr. Quivik, Molycorp  
12 applied for a DMEA loan in 1967.

13 MR. TODD: Let's pull the application,  
14 which is CX46.

15 Q (By Mr. Todd) This document has been  
16 displayed in court previously, but we haven't really  
17 worked through it in a systematic way.

18 So for the Court's benefit, I would like  
19 to do that with you.

20 You see here, is this the first page of  
21 Molycorp's application?

22 A. Yes.

23 MR. TODD: If we go to the next page,  
24 Patty.

25 Q (By Mr. Todd) You see it was signed by

1       **Mr. J.B. Carman, who you have mentioned this**  
2       **morning?**

3           A.       Yes.

4           **Q.       In the application --**

5                   MR. TODD:   If we go to Page 6 of 15 in the  
6       PDF.

7                   **Q       (By Mr. Todd) And let me direct you,**  
8       **Doctor, to the third paragraph down.**

9                   And the last sentence there reads,  
10       **"Exhaustion of the ore bodies below the tunnel**  
11       **stopped production."**

12                  **Do you see that?**

13                  A.       Yes.

14                  **Q.       So Mr. Carman acknowledges, in the**  
15       **application, that at this point production of ore**  
16       **from the mine has ceased?**

17                  A.       Correct.

18                  **Q.       And he actually notes that not once but**  
19       **twice.**

20                  MR. TODD:   Patty, can we call out the last  
21       paragraph on that page?

22                  **Q       (By Mr. Todd) He says, "As stated, no**  
23       **production is forthcoming from any part of the mine**  
24       **and no ore reserves are considered available."**

25                  **Do you see that?**

1 A. Yes.

2 Q. So as of the time of this application, no  
3 ore in the mine?

4 A. Correct.

5 Q. And to complete this paragraph, and this  
6 was flagged yesterday, he also represented to the  
7 Government that -- this is the last sentence here --  
8 "No other exploration work is, for the present,  
9 planned other than covered by this application."

10 Correct?

11 A. Correct.

12 Q. And this application refers to the  
13 application being made to the DMEA for a loan,  
14 right?

15 A. Yes.

16 Q. Dr. Rigby described yesterday, in his  
17 testimony, that Molycorp, in its application,  
18 proposed a program of drifting and crosscutting to  
19 search for more high-grade veins.

20 You agree with that, right?

21 A. Yes.

22 Q. Molycorp didn't propose any diamond  
23 drilling or any other kind of exploratory drilling  
24 in its program?

25 A. Correct.

1           Q.     And no form of systematic sampling?

2           A.     Correct.

3           Q.     I am going to paraphrase and skip a little  
4     bit here to move us along, but you would agree, I  
5     believe, and I think you acknowledged this in your  
6     testimony, that the Government did not simply accept  
7     Molycorp's proposal as written, right?

8           A.     Correct.

9           Q.     In fact --

10            MR. TODD: Could we pull up CX48, please.

11           And let's go to Page 6 of 10.

12           Q     (By Mr. Todd) CX48, Doctor, is a  
13     compilation of DMEA materials back and forth inside  
14     the agency assessing the application. And I know  
15     you have seen this before.

16           MR. TODD: Patty, let's call out the  
17     second paragraph, first sentence.

18           Q     (By Mr. Todd) This is a memo from the field  
19     team, Dr. Quivik, who wrote, "In reviewing the  
20     application prior to the examination, it was  
21     apparent that the company's exploration program of  
22     approximately \$450,000 was not based on known  
23     geological data, and, therefore, was not warranted  
24     in its entirety."

25           That was the DMEA field team's assessment

1 of Molycorp's proposal, right?

2 A. Right.

3 Q. And having objected to Molycorp's  
4 proposal, the field team then went on to note that,  
5 "There was data suggesting that there may be a large  
6 and significant low-grade molybdenum body at  
7 Questa."

8 Right?

9 A. Correct.

10 Q. And they suggested looking for that  
11 instead?

12 A. Correct.

13 Q. And pursuant to that, it was the  
14 Government that then suggested adding diamond  
15 drilling and sampling to the exploration program,  
16 right?

17 A. That is right.

18 Q. Now, the DMEA recognized at the time,  
19 Dr. Quivik, did it not, that it was asking Molycorp  
20 to undertake something that was entirely new and  
21 different from what it had been doing before?

22 A. Yes. Not entirely new in the mining  
23 industry but at that site, yes.

24 Q. That's an entirely fair point.

25 MR. TODD: Let's look at Chairman George's

Page 522

1 supplemental memo, dated December 27, 1957, and that  
2 is CX, the same packet, Page 4.

3 Let's call out the last paragraph, please.

4 Q (By Mr. Todd) And, again, this is a DMEA  
5 official writing, and he notes, with the apologies  
6 for reading a long paragraph, but follow along with  
7 me, "It is suggested that the field examiners'  
8 alternate program should be discussed with the  
9 applicant during the examination.

10 "Judging from available information, the  
11 milling facilities and probably the main addit would  
12 not be able to handle large tonnages of ore,  
13 therefore, the applicant may not want to participate  
14 in an exploration program to search -- or project,  
15 sorry, to search for large bodies of ore of lower  
16 grade than have previously been mined because it  
17 would require a considerable capital outlay to  
18 expand the mine and surface plant to make the 0.5 to  
19 0.75 percent MLS2 material commercially  
20 exploitable."

21 That is consistent with what you disagreed  
22 with, right? They were suggesting something  
23 different at Molycorp, at Questa?

24 A. Did I disagree with something?

25 Q. Yeah, you agreed with me --

1           A.     Oh, okay. I thought I heard you say  
2     disagree.

3                   Yeah, this is a nice summary of this stage  
4     in the negotiation process.

5           Q.     And a shift like this would also result in  
6     a significantly larger amount of waste rock than the  
7     operation that had been at the Questa site  
8     previously, right?

9           A.     Well, if they were to have developed an  
10   underground block cave mining, it would not have  
11   been significantly more waste rock, but it would  
12   have been a larger operation, to be sure, than they  
13   had been undertaking.

14          Q.     You are distinguishing block cave from  
15   open pit. But let me talk to you on block cave.

16                   A block cave mine, developing a large  
17   low-grade ore body would certainly produce much more  
18   in the way of mine tailings than the prior  
19   underground pick and shovel operation at Questa,  
20   right?

21          A.     That is correct.

22          Q.     And an open pit mine would result in a  
23   significantly larger amount of both waste rock  
24   overburden and tailings?

25          A.     Yes.

1           Q.     And that would have been known and obvious  
2     at the time to these DMEA officials, right?

3           A.     Everyone in the mining industry.

4           Q.     Now, we have heard testimony yesterday  
5     that Molycorp was resistant to the Government's  
6     proposal in 1957 that Molycorp search for low-grade  
7     ore.

8                   You don't disagree with that  
9     characterization, do you?

10          A.     No.

11          Q.     You have looked through the field team's  
12     engineering and geological report, which recounts  
13     the negotiations, right?

14          A.     Yes.

15          Q.     And as described in that report, Molycorp  
16     and Mr. Carman, in particular, weren't fully in love  
17     with the Government's proposal when it was first  
18     made?

19          A.     That is right.

20          Q.     And the field team described, at least one  
21     of the meetings, one of the negotiation meetings as  
22     being a fiasco, right?

23          A.     Yes.

24          Q.     Ultimately, however, the Government and  
25     Molycorp agreed to an exploration program that

1       combined some of Molycorp's desire to tunnel  
2       underground from its original proposal and the  
3       Government's desire to search in a particular area  
4       for low-grade ore using diamond drilling and  
5       sampling, right?

6           A.       Yes, a sort of compromised work plan that  
7       both parties would agree to.

8           Q.       Precisely. A compromised plan, and as any  
9       new contract, neither side was completely happy,  
10      meaning the negotiators did a good job, fair?

11          A.       Sounds good.

12          Q.       It was the field team that recommended  
13      diamond drilling, right?

14          A.       Yes.

15          Q.       And the field team specified how the core  
16      samples from those drills should be handled?

17          A.       Yes.

18          Q.       And they also recommended including  
19      channel sampling, cutting a continuous strip along  
20      the tunnel wall 3 inches wide and 1-inch deep,  
21      right?

22          A.       Yes.

23          Q.       So the contract reflecting this  
24      compromised program was executed in 1957?

25          A.       Yes.

1 Q. May of '57.

2 And the contract included this joint  
3 program that included drilling and sampling?

4 A. Yes.

5 Q. And the contract required Molycorp to  
6 perform all of the work expertly, in a workmen-like  
7 manner and in accordance with good mining standards,  
8 right?

9 A. Yes.

10 Q. And the Government was entitled to inspect  
11 the workings, right?

12 A. Correct.

13 Q. And they could inspect the workings to  
14 make sure that the work was being performed in an  
15 appropriate manner, right?

16 A. Yes, particularly the work for which  
17 Molycorp would seek the Government's 50 percent  
18 share.

19 Q. Precisely.

20 A. Yeah.

21 Q. Precisely.

22 And Molycorp had to keep books and records  
23 that the Government could review?

24 A. Yes.

25 Q. And Molycorp was required to make monthly

1 reports detailing the work it had performed under  
2 the contract and including all of the sampling data,  
3 right?

4 A. Yes, if it wanted to be paid.

5 Q. Exactly.

6 And these requirements allowed the U.S. to  
7 confirm that Molycorp was implementing the program  
8 according to its terms, right?

9 A. Correct.

10 Q. So they knew whether to pay?

11 A. Correct.

12 Q. The work under the program, to be funded  
13 under the program, is set forth in detail in an  
14 Exhibit A to the contract, right?

15 You are familiar with that?

16 A. Yes.

17 Q. And that Exhibit A identified the  
18 drifting, the crosscutting, the drilling, and the  
19 sampling we have discussed?

20 A. Yes.

21 Q. It specified precisely how diamond drill  
22 holes were to be drilled?

23 A. Yes.

24 Q. It specified the size of timbering in the  
25 drifts and crosscuts?

1 A. Yes.

2 Q. It specified that drill core samples  
3 should be separated into 10-foot sections?

4 A. Yes.

5 Q. It specified the size of the drill  
6 stations to be constructed underground?

7 A. Yes.

8 Q. Now a drill station is a cutout from a  
9 tunnel wall that leaves enough space to get the  
10 drill in and extract the 10-foot core, right?

11 A. Right. Without interfering with traffic  
12 along the drift.

13 Q. Precisely.

14 And the contract also specified how  
15 channel samples would be taken and how those samples  
16 would be handled, assayed and preserved, correct?

17 A. Yes.

18 Q. And these things were all subject to  
19 Government approval?

20 A. To make sure that Molycorp was doing what  
21 it said it would do in the contract, yes.

22 Q. Okay. Do you recall -- we can pull it up  
23 if we need to -- but the contract provides, "the  
24 location, direction, inclination, extent and method  
25 of sampling the work under the contract are subject

1 to Government approval"?

2 A. Yes.

3 Q. And as you have noted a few times, under  
4 the contract the Government agreed to pay 50 percent  
5 of the work specified in the contract?

6 A. Yes.

7 Q. The Government had no obligation to pay  
8 for work not specified in the contract?

9 A. Correct.

10 Q. Right.

11 And if the work deviated from the  
12 contract, the Government could refuse to pay?

13 A. Correct.

14 Q. If the work was performed in a manner  
15 unsatisfactory to the Government, the Government  
16 could refuse to pay?

17 A. Yes.

18 Q. And if the Government --

19 A. Under the terms of the contract.

20 Q. Precisely, thank you.

21 And if the Government, in its sole  
22 discretion, concluded that the program had failed to  
23 achieve anticipated results and a discovery was not  
24 likely, the Government could terminate the contract,  
25 right?

Page 530

1 A. During the contract, yes.

2 Q. So the DMEA program wrapped up in June of  
3 1960.

4 Does that sound right?

5 A. Yes.

6 Q. And at the conclusion of the program, and  
7 we have already seen these documents in court, both  
8 Molycorp and the DMEA submitted final reports  
9 documenting the discovery that had been made as part  
10 of the program?

11 A. Yes.

12 Q. And the DMEA's final report, wouldn't you  
13 agree, recognized that, "it did recognize that  
14 considerable exploration will still have to be done  
15 before completed evaluation of the molybdenum  
16 reserves and potential for this property can be  
17 made."

18 Right?

19 A. Yes.

20 Q. And that was your point earlier, in an  
21 early stage of a project, you may not yet know  
22 enough to say we have got ore?

23 A. Right.

24 Q. Okay. Nonetheless, the DMEA's final  
25 report, the technical experts did recommend that,

1       "Because of the significant tonnage of potential  
2       molybdenum ore found as a result of the exploration  
3       carried out under the contract, it is recommended  
4       that the property be certified as a discovery"?

5           A.       Yes.

6           Q.       That is what they reported. Okay.

7                   And as we have discussed in court, in  
8       January of 1961, the Federal Government did, in  
9       fact, certify a discovery?

10          A.       Yes.

11          Q.       Okay.

12                   MR. TODD: Could we bring up CX113,  
13       please.

14                   I am not sure we have actually shown the  
15       certification yet, Your Honor, but here it is.

16          Q       (By Mr. Todd) Dr. Quivik, this is the  
17       Federal Government's certification of the discovery  
18       at Questa.

19          A.       Yes.

20          Q.       Okay. And you noted earlier that the  
21       Government wants this certification for its own  
22       internal purposes but you would also agree that  
23       simple common sense suggests that with a  
24       certification like this in hand, a mining company is  
25       more likely to be able to borrow money than without

1       such a thing, right?

2           A.     This would be a nice document to have when  
3     approaching a bank or other finance.

4           Q.     With the certification in hand, Molycorp  
5     did, in fact, borrow money for further exploration  
6     and delineation of the ore body at Questa, right?

7           A.     Yes.

8           Q.     In fact, and I think you noted this in  
9     your testimony, this ability to borrow was critical  
10    because Molycorp heavily financed the program,  
11    putting in very little of its own capital, right?

12          A.     That is right.

13          Q.     And Molycorp used the funds it borrowed to  
14    delineate the ore body, right?

15          A.     Yes.

16          Q.     And you are not aware, Doctor, of any  
17    document that indicates definitively that Molycorp  
18    would have spent millions of dollars to delineate  
19    the ore body if it had not already had the body of  
20    knowledge developed during the DMEA program?

21          A.     I can't say that they would have, but I  
22    should add that I take issue with the idea that they  
23    would not have, and three of Chevron's witnesses  
24    have made the point that they would not have but for  
25    the DMEA program.

1                   And we have some testimony yesterday that  
2                   suggested the best place to drill for oil is in an  
3                   oilfield and mining companies knew that that was the  
4                   case. If Molycorp didn't want to, other mining  
5                   companies could very well have been interested in  
6                   doing that.

7                   And we have Dr. Rigby's testimony that  
8                   options available to Molycorp could have been  
9                   entering a joint venture or I believe he made one  
10                   other option that was possible, but for instance,  
11                   Molycorp could have sold the property to another  
12                   mining company.

13                   So I think it is impossible to say  
14                   definitively that that discovery would not have been  
15                   made absent the DMEA loan. As an historian, I can't  
16                   say that it likely would have but I think the  
17                   chances are pretty good, given mining history in the  
18                   United States.

19                   **Q.       As an industrial historian, you can't  
20                   testify definitively either way?**

21                   A.       I can say that testimony saying that they  
22                   definitely would not have, cannot be supported by  
23                   the evidence.

24                   **Q.       You can't say definitely would not have or  
25                   definitely would have?**

1           A.     I am not saying definitely would have, I  
2     am saying definitely would not have.

3           Q.     **As an industrial historian, you can't say**  
4     **definitively either way?**

5           A.     Right. But I am suggesting that there is  
6     a very good likelihood that it would have been  
7     discovered.

8           Q.     **You are speculating it might have been.**

9           A.     Right, I am speculating.

10          Q.     **Through its exploration, Molycorp then**  
11     **moved from having indicated ore, which is the term**  
12     **the DMEA used, to ultimately having reserves at**  
13     **Questa?**

14          A.     Yes.

15          Q.     **And it then spent tens of millions of**  
16     **dollars more to build the mill, the infrastructure**  
17     **and developed the open pit for production, right?**

18          A.     Yes, based on a sequence of events that  
19     discovered material that was not at all exploratory  
20     with the DMEA.

21          Q.     **Right.**

22                   **We're following the causal chain across**  
23     **time?**

24          A.     Yes.

25          Q.     **Okay. And you agree that -- you would**

1 agree that Molycorp would not have spent this  
2 additional money without having confirmed reserves?

3 A. Correct.

4 And it wouldn't have if it had decided to  
5 ignore the discovery of low-grade ore bodies and  
6 insisted on looking for high-grade material as well.  
7 That was always an option for Molycorp.

8 Q. Looking for more high-grade?

9 A. Yeah, uh-huh. If they were so intent on  
10 that. They could have ignored this discovery and,  
11 you know, continued looking for high-grade.

12 Q. Fair point.

13 But they didn't, and here we are.

14 A. Yeah, correct.

15 Q. Let me shift gears to the tailings  
16 pipeline and the impoundment, and I have just a few  
17 questions on this for you.

18 In your questioning, you talk about the  
19 tailing pipeline, the special use permits and the  
20 impoundments.

21 Obviously, the open pit began production,  
22 Molycorp immediately, to dispose of the waste rock  
23 and the tailings, right?

24 A. Yes.

25 Q. And Molycorp used an approximate 9.5 mile

1 long pipeline to move tailings down to the  
2 impoundments that we saw earlier in Ms. Sitton's  
3 testimony?

4 A. Right.

5 Q. And the Forest Service, as you know,  
6 issued Molycorp a special use permit to operate that  
7 pipeline.

8 A. To occupy that ground to operate it, yes,  
9 sir.

10 Q. Because about half the distance, about  
11 half of that 9.5 miles was Forest Service land,  
12 right?

13 A. Right.

14 And the rest went across various other  
15 kinds of land, including private land.

16 Q. Precisely.

17 I think somewhere in the record there is a  
18 picture of the pipeline going right past the ranger  
19 station?

20 A. Yeah.

21 Q. There is pipeline and there is the ranger  
22 station?

23 A. Yeah.

24 Q. So the ranger knew about the pipeline?

25 A. Yeah.

1           Q.     Okay.  And the Forest Service has  
2 acknowledged that, in its sworn testimony that has  
3 been admitted in evidence in this case, that issuing  
4 these special use permits was a discretionary act of  
5 the Government.  Forest Service personnel were not  
6 required to grant them.

7                   You don't agree with that testimony, do  
8 you?

9           A.     No.

10          Q.     Okay.  And you would agree that without  
11 this special use permit, Molycorp would not have  
12 been able to run the pipeline across Federal land?

13          A.     Correct.

14          Q.     And without the pipeline, Molycorp would  
15 not have been able to operate the mill?

16          A.     It needed a place to put tailings, so it  
17 would have needed to convey tailings in some  
18 direction or another with the pipeline, yes.

19          Q.     Without the mill the mine wouldn't  
20 operate?

21          A.     Correct.

22          Q.     Molycorp purchased the land for the  
23 western impoundments in --

24          A.     May I finish?  Just a closing remark.

25          Q.     I thought you were done.

1           A.       The one thing that is missing is any  
2 suggestion if it were a discretionary act on the  
3 part of the Forest Service, on what basis the Forest  
4 Service would have denied that special use permit.  
5 And I have seen no suggestion of why the Forest  
6 Service should have done so.

7           Q.       **Well, the testimony from the Forest**  
8 **Service is that this is a discretionary act that**  
9 **could be granted or revoked in the discretion of the**  
10 **Forest Service.**

11           **You wouldn't disagree with the Forest**  
12 **Service sworn testimony, do you?**

13           A.       All I am saying is that I'd like to  
14 see a reason why, if it is discretionary, they  
15 should have other than arbitrarily denying it.

16           Q.       **The --**

17           THE COURT:   And they would never do  
18 anything arbitrarily.

19           MR. TODD:   I would like to think so.

20           Mr. Fredley testified yesterday, Your  
21 Honor, that Federal agencies always act in the  
22 public interest.

23           THE COURT:   Not always.

24           MR. TODD:   I may not suggest that as a  
25 finding of fact.

1           Q     (By Mr. Todd) Molycorp, Dr. Quivik,  
2     purchased the land for the western impoundment from  
3     the United States in 1966?

4           A.    Correct.

5           Q.    And in deciding to sell the land to  
6     Molycorp for use of a tailings pond, the  
7     United States took into account the positive  
8     economic benefits that the Questa Mine would have on  
9     Northern New Mexico, right?

10          A.    That was one of the factors, you know,  
11     checking off all of the factors they had to look at  
12     to see whether such a sale was allowable under the  
13     law for selling public land.

14          Q.    You have reviewed the appraisal report  
15     that ultimately concludes, as we have heard this  
16     morning, that the sale of the land to Molycorp for  
17     use as a tailings pond was the highest and best use  
18     of the land.

19                    You have reviewed that document?

20          A.    Yes. But I think people oftentimes think  
21     industrial uses are higher uses than grazing, for  
22     instance.

23          Q.    Okay. And in that document -- I can pull  
24     it up if we need to, but I am trying to move us  
25     along -- the Government did note that expansion of

1 the diamond mine would be a major economic benefit  
2 to the area and noted that the land is great,  
3 indeed, for a tailings pond, right?

4 A. Correct.

5 Q. And the appraisal noted that this area of  
6 New Mexico has been generally economically depressed  
7 for many years, right?

8 A. Yes.

9 Q. And it noted that Federal and state  
10 officials are making a concerted effort to find  
11 means of stimulating the economy, right?

12 A. Yes.

13 Q. The appraiser noted the number of  
14 employees who may be hired, salaries that may be  
15 paid and, you know, the general economic stimulus,  
16 right?

17 A. Yes.

18 Q. As we noted, concluded that the sale was  
19 the highest and best use of the land?

20 A. Yes.

21 Q. Okay. Let's shift gears now to the land  
22 exchange.

23 A. Before we do, one other thing that I think  
24 is worth noting is that in looking at the procedure  
25 the BLM went through in selling that land, I see

1 nothing to indicate that the BLM did anything  
2 extraordinary because in addition to all the other  
3 things, it would benefit the economy of Northern  
4 New Mexico.

5 So that was not, as far as I can see, the  
6 driving factor had that -- had this been a  
7 prosperous area, there is every reason to believe  
8 that the BLM would have made the sale anyhow. It  
9 met all the criteria.

10 Q. Okay. But be that as it may, everything  
11 that I just went through is in that appraisal  
12 report, right?

13 A. That is correct.

14 MR. TODD: And for the record, that is  
15 Chevron Exhibit 158, Your Honor, which is already in  
16 evidence.

17 Q (By Mr. Todd) Now let's talk about land  
18 exchange, which, as Mr. Dewey testified, is why we  
19 are here today.

20 In your testimony, Dr. Quivik, you state  
21 that Molycorp owned all the land in which Molycorp  
22 operated its first underground mine, its open pit  
23 mine and its second mine, the block cave mine.

24 Is that your understanding?

25 A. Yes.

1           Q.     And you also testify that you have seen no  
2     evidence that the United States imposed requirements  
3     on where Molycorp is supposed to waste?

4           A.     Correct.

5           Q.     Now, you do understand that most of the  
6     land on which the Questa Mine was developed was  
7     originally owned by the United States?

8           A.     Yes.

9           Q.     And you do understand that, at different  
10    times, Molycorp undertook exploration activities on  
11    land that was still owned by the United States?

12          A.     Land over which Molycorp had mining  
13    claims, so it was acting legally.

14          Q.     Okay. Right.

15                  But that is still land that is owned by  
16    the U.S. It has --

17          A.     U.S. has title but Molycorp owned the  
18    claims to those, owned all of the other property  
19    rights.

20          Q.     We can leave it to the Tenth Circuit,  
21    Doctor, to determine whether having title over land  
22    makes you an owner of that land --

23          A.     Right.

24          Q.     -- and I think they have already resolved  
25    that issue, but you can maintain that distinction.

1           A.       Right.

2           Q.       You also understand that from time to time  
3        Molycorp engaged in mining activities, including  
4        drilling and tunneling on lands that were at the  
5        time still owned by the Federal Government or as you  
6        would like to say, to which the Federal Government  
7        still owned title?

8           A.       Yes.

9           Q.       And operated tailings pipelines across  
10      Federal land?

11          A.       Yes, Forest Service land.

12          Q.       And disposed of waste rock on lands owned  
13      by the Federal Government?

14          A.       Yes.

15          Q.       Now, on Monday His Honor asked --

16          A.       The Government owned title, yeah. They  
17      owned it, almost sounds like you are trying to  
18      suggest that Molycorp was somehow breaking the  
19      law --

20          Q.       No.

21          A.       -- putting rock on --

22          Q.       Not at all.

23                   The question here is the implication of  
24      the ownership.

25          A.       Uh-huh.

1           Q.     On Monday His Honor asked Mr. Dewey, when  
2     he was testifying, about the placement of waste rock  
3     on lands still owned by the United States.

4           A.     Yes.

5           Q.     And you would agree, would you not, that  
6     the fact is that most of the waste rock at Questa  
7     was placed on land when it was still owned by the  
8     Federal Government, right?

9           A.     I have seen those analysis and I have not  
10   conducted my own analysis.

11          Q.     Okay.

12          A.     So I am taking those analysis as accurate.  
13   I will agree with them.

14          Q.     Okay.

15                MR. TODD: Let's pull up Paragraph 52,  
16   please, of Dr. Quivik's testimony.

17          Q     (By Mr. Todd) This is your sworn testimony  
18   in this case, again, which I think answers His  
19   Honor's questions.

20               "Most of the waste rock that Molycorp  
21   generated and disposed of at the Questa site had  
22   already been placed on the selected lands  
23   (previously encumbered by Molycorp unpatented mining  
24   claims), by the time the land exchange was completed  
25   in 1974. Molycorp's general manager at the time

1       testified that in 1974 the waste-rock piles had  
2       grown to approximately 80 percent of the size they  
3       would eventually reach."

4                   Did I read that correctly?

5       A.       Yes.

6       Q.       And that is your sworn testimony in this  
7       case?

8       A.       Yes.

9       Q.       And you would agree, would you not, sir,  
10      that, with respect to the land from the Federal  
11      Government, that ultimately hosted the mine, that  
12      all came through patenting, sales and land  
13      exchanges?

14      A.       Yes.

15      Q.       So let's talk -- let's focus in now on the  
16      big land exchange. There was more than one, but the  
17      big one consummated in 1974.

18                   You are familiar with that?

19      A.       Yes.

20      Q.       Okay. And Molycorp -- well, as we heard  
21      in prior testimony, the discussions around that  
22      started in January of '69, right?

23      A.       Yes.

24      Q.       Okay. But Molycorp submitted a formal  
25      application for the --

1           A.     Excuse me, discussions around just  
2     narrowed on the land exchange, the possibility of  
3     land exchange.

4           **Q.     The possibility that excluded the**  
5     **possibility of land exchange?**

6           A.     Right. The discussions for looking for  
7     ways to acquire rights to dump waste rock, as I  
8     recall, started in '68 with the inquiry about a  
9     special use permit.

10          **Q.     That is good of you to recall that**  
11     **testimony.**

12           And then Mr. -- I forget if it was Mr. --  
13     Dr. Rigby or Dr. Fredley noted that there may have  
14     been some discussions earlier in time about land  
15     exchange.

16           But in any event, we have seen there was  
17     the January '69 meeting between Molycorp and the  
18     Forest Service --

19          A.     Yes.

20          **Q.     -- where we have some documentation of a**  
21     **suggestion of a land exchange?**

22          A.     Yes.

23          **Q.     So thereabouts.**

24           **Molycorp submitted a formal application**  
25     **for that exchange in November of '69?**

1 A. Right, correct.

2 Q. And prior witnesses have described the  
3 circumstances leading up to the land exchange and so  
4 just as a general matter, could let us set up,  
5 Molycorp had discovered a bit of weakness in the  
6 west wall, required the removal of a lot more  
7 overburden, increased stricken ratio, a lot more  
8 waste rock to dispose of, hence, the need for a lot  
9 more land?

10 A. Right, yes.

11 Q. And in your testimony, you note that  
12 Molycorp alone -- and this is your testimony,  
13 Molycorp alone made the decision to keep operating,  
14 right?

15 A. Yes.

16 Q. Okay. And you testified the Government  
17 had nothing to do with that decision?

18 A. Correct.

19 Q. Okay. Now, Molycorp was aware -- I'm  
20 sorry. The Government was aware of Molycorp's need  
21 for additional land to dispose of this additional  
22 waste rock, right?

23 A. Yes.

24 Q. And in all of those years, in those years,  
25 you are not aware of any evidence that the

1     **Government recommended or told Molycorp you need to**  
2     **cease operating, right?**

3           A.     Correct.

4           Q.     **Okay. Instead, the United States**  
5     **ultimately provided more land to Molycorp to place**  
6     **that waste rock, right, through the land exchange?**

7           A.     Offered one avenue for Molycorp to obtain  
8     title, knowing that Molycorp could obtain title by  
9     staking mill site claims.

10           So knowing that under the Mining Law  
11    Molycorp could get that land and recognizing that  
12    the mill site option was the one by which they would  
13    be able to do it.

14           So they offered the land exchange option  
15    as one that would be beneficial to both parties.

16           Q.     **Right.**

17           **So to clarify, and this is in your direct**  
18    **testimony, in the Government's view, Molycorp had a**  
19    **right under the Mining Laws to stake mill site**  
20    **claims and use those for waste-rock disposal, right?**

21           A.     Yes.

22           Q.     **And instead, the Government proposed the**  
23    **land exchange?**

24           A.     Yes.

25           MR. TODD:   Let's pull up, please, CX212.

1 No, that is not it. Let's try 211. 210.

2 If I just kept going, I would have got  
3 there.

4 Q (By Mr. Todd) You have seen this document  
5 before, right, Dr. Quivik?

6 A. Yes.

7 Q. This is an attendee list from this January  
8 meeting and some notes by Jack Watson, Molycorp's  
9 lawyer?

10 A. Yes.

11 Q. And the list notes the attendees attending  
12 for Molycorp were Messers. Greslin, Lansing, Watson,  
13 Torgerson and Crimes, right?

14 A. Yes.

15 Q. And for the Forest Service, Mr. Taylor,  
16 Mr. Ashby, Mr. Taylor and Mr. Parde?

17 A. Correct.

18 Q. Now, the Forest Service is the lowest  
19 level of district; is that right?

20 A. Yes.

21 Q. The Federal District Ranger, Mr. Hart, he  
22 is the local guy for Molycorp?

23 A. Yes.

24 Q. And then above that, above the district,  
25 is a forest, right?

1 A. A National Forest, yes.

2 Q. **Here it is, the Carson National Forest?**

3 A. Yeah.

4 Q. **And then above the forests, the number of**  
5 **forest aggregated into a region right?**

6 A. Correct.

7 And here we are talking about Region 3,  
8 which is headquartered in Albuquerque, right?

9 A. Yes.

10 Q. **So this meeting wasn't taking place at the**  
11 **local district or the forest, it was down here in**  
12 **Albuquerque at the regional level?**

13 A. Correct.

14 Q. **And Mr. Taylor, according to the Forest**  
15 **Service, I don't know if you actually know this, was**  
16 **responsible for the -- he was the branch chief**  
17 **responsible for land management across Region 3?**

18 A. Yes.

19 Q. **Okay. And Mr. Parde was the chief mineral**  
20 **examiner for Region 3, is that right?**

21 A. I forget his title. That may be true. I  
22 remember Harvey -- Harv Ashby as a mineral examiner,  
23 but I don't recall Parde's title. That may be  
24 correct.

25 Q. **And do you know whether Mr. Cutler was an**

1     **Assistant Regional Forester?**

2           A.     I don't recall his title either.

3            MR. TODD: I think those titles are shown  
4     on CX211.

5            Can we just pull that up.

6            We can move on. That is not  
7     consequential.

8           Q     **(By Mr. Todd) This meeting happening in  
9     Albuquerque, is it a significantly, relatively  
10    senior level within the Forest Service, right?**

11          A.     It looks like it, yeah.

12          Q.     **And a meeting like this -- well, as we  
13     discussed at your deposition, Molycorp would have  
14     met with the region because they were facing a  
15     serious challenge, right?**

16          A.     Yes.

17          Q.     **Disposing of a larger volume of waste  
18     rock, whether or not they had a right to, would have  
19     a significant impact on Forest Service land and  
20     Molycorp was being mindful of the Forest Service's  
21     reaction, would you agree?**

22          A.     Yes, they had been working cooperatively  
23     for decades.

24          Q.     **And there is a lot in the record that  
25     documents that good relationship; is that right?**

1 A. Yes.

2 Q. And it is nice to see that.

3 And so MolyCorp came to Albuquerque, the  
4 regional headquarters, to discuss possible ways of  
5 finding land to dispose of this larger volume of  
6 waste rock?

7 A. Yes.

8 Q. Now, a meeting at the region, and I don't  
9 know your experience, I worked for the Federal  
10 Government for a little while, and maybe I am just  
11 channeling my experience, the meeting with senior  
12 Government officials don't just spring forth, they  
13 take some planning, right?

14 A. Yes.

15 Q. Particularly when you have got, you know,  
16 several people here, four, five people on both  
17 sides, all relatively senior, right?

18 A. Yes.

19 Q. And advanced planning would probably  
20 include subjects to be discussed and who would  
21 attend, right?

22 A. Yes.

23 Q. Now, according to the Forest Service's  
24 sworn testimony in this case, Mr. Taylor had no  
25 responsibility for the Questa operation himself.

1                   **Do you know if that is true?**

2           A.       I don't know that.

3           Q.       **Do you have any basis to disagree with the**  
4 **Forest Service's testimony?**

5           A.       No.

6           Q.       **The testimony suggests that he was**  
7 **responsible for land exchanges.**

8                   **Do you know -- do have any reason to doubt**  
9 **that?**

10          A.       No.

11          Q.       **Okay. And a former Forest Service**  
12 **employee, who was deposed in this case, Mr. Roy**  
13 **Grande, testified that Mr. Cutler handled all large**  
14 **land exchanges.**

15                   **Have you reviewed his deposition?**

16          A.       I have. I don't remember that he  
17 specified Cutler but I will take your word for it.

18          Q.       **You don't have any reason here and now to**  
19 **disagree with that, do you?**

20          A.       No.

21          Q.       **So the Government --**

22                   MR. TODD: Could we pull back up the 210?  
23 Thanks.

24          Q        **(By Mr. Todd) So looking at the bottom of**  
25 **the list, they showed up with a team of folks who**

1       **were ready to talk land exchanges.**

2           A.       Yes.

3           Q.       Now, we know from Mr. Watson's notes at  
4       the meeting, that Mr. Taylor, for the Forest  
5       Service, suggested that the U.S. and Molycorp engage  
6       in land exchange?

7           A.       Yes.

8           Q.       And Mr. Watson's notes record that  
9       Molycorp agreed to prepare a description of the  
10       lands that Molycorp wanted to receive and they would  
11       provide that description to the Forest Service,  
12       right?

13          A.       Yes.

14          Q.       And the Forest Service would then appraise  
15       the land and make suggestions for the exchange?

16          A.       Yes.

17                MR. TODD: Let's pull up 212, now, please.

18          Q       (By Mr. Todd) In February -- we saw this  
19       document yesterday.

20                In February of -- February 20th of 1969,  
21       Mr. Watson wrote to Mr. Taylor, following up on the  
22       January 28th meeting -- and you have seen this  
23       letter before, right?

24          A.       Yes.

25          Q.       And Mr. Watson identified land that

1       Molycorp might want in an exchange?

2           A.     Yes.

3           Q.     And as per the meeting notes, he was  
4       providing a description so the Government could  
5       appraise the land, right?

6           A.     Yes.

7           Q.     And that is a requirement for an exchange,  
8       right, appraisals and value for value?

9           A.     Yes.

10          Q.     And Mr. Watson also asked the Government  
11       to confirm that it would identify parcels of private  
12       land for Molycorp to buy land to trade to the  
13       Government for the lands Molycorp wants, right?

14          A.     Yes.

15          Q.     Now, ultimately, as it turned out,  
16       Molycorp suggested lands that it had an option on?

17          A.     Offered lands, yes.

18          Q.     Offered lands. I always get offered and  
19       selected confused, so I try really hard not to use  
20       them.

21                   And part of the process, the exchange  
22       process, the Forest Service did a survey, the  
23       offered and the selected lands?

24          A.     Yes.

25          Q.     I can use them both together.

1 A. Excuse me?

2 Q. I can use both terms together.

3 And the surveys confirmed that the land  
4 that were going to be given to Molycorp were  
5 non-mineral, right?

6 A. Yes.

7 Q. And the regional forester here, this would  
8 be Region 3 here in Albuquerque, found that the land  
9 exchange was in the public interest?

10 A. Yes.

11 Q. Okay. Now, you would agree, would you  
12 not, Dr. Quivik, that the United States benefited  
13 from the land exchange?

14 A. If it was in the public interest, then,  
15 yes.

16 Q. In exchange for the lands given to  
17 Molycorp, the United States received two parcels of  
18 land, right?

19 A. Yes.

20 Q. And those two parcels encroached on Forest  
21 Service land, right?

22 A. I have heard the term "in holding." They  
23 were surrounded by Forest Service land, and so they  
24 were within the boundaries of the National Forest  
25 but they were private land.

1           Q.     And when -- and this is a matter of,  
2     again, first year property law for a law student,  
3     but when a landowner holds land that is surrounded  
4     by Forest Service land, the Forest Service has to  
5     support that private land, right?

6           A.     Yes.

7           Q.     By allowing access and utilities and such,  
8     right?

9           A.     That is my understanding.

10          Q.     So the Forest Service likes to close up  
11     those gaps?

12          A.     Yes.

13          Q.     So that was a benefit here?

14          A.     Right. And that was the purpose of the  
15     1922 Land Exchange Act to do that sort of thing.

16          Q.     Great.

17                 And the Government typically has an idea  
18     whether it is a map in the office or whatever, but  
19     they know where these parcels are and would like to  
20     get them?

21          A.     Presumably.

22          Q.     The Forest Service also benefited from  
23     transferring the selected lands to Molycorp, right?

24          A.     Well, it -- those were lands that the  
25     Forest Service couldn't really manage because they

1 had been covered with mining activity and so, in  
2 exchange, the Forest Service got land that it could  
3 administer as national forestry.

4 Q. And when you say they have been covered by  
5 mining activity, they had been covered in some form  
6 by waste rock, right?

7 A. Yeah, by mining activity.

8 Q. The Government also benefited, I think you  
9 would agree, by alleviating itself of any need to  
10 administer those acres?

11 A. Yes.

12 Q. And the Government officials avoided the  
13 workload of having to process a bunch of individual  
14 mill site claims?

15 A. Correct. As did -- as Molycorp.

16 Q. Okay. Now the Forest Service has  
17 testified in this matter and submitted sworn  
18 deposition testimony that it executed the land  
19 exchange to transfer away lands that no longer  
20 served Forest Service purposes.

21 Do you dispute that testimony?

22 A. No.

23 Q. Now, the purpose of the land exchange was  
24 to provide land to Molycorp for use for waste-rock  
25 disposal?

1           A.     To provide an alternative means for  
2     Molycorp acquiring title to that land.

3           Q.     **Okay. So that is a, yes, I think?**

4           A.     It is a yes, but they didn't just walk up  
5     and say, Hey, we will give you some land so you can  
6     dump stuff on it. They were already using it. They  
7     had the rights to use it. Could have gotten it as  
8     mill site claims. So the Forest Service was  
9     offering an alternative means of getting title to  
10    that.

11          Q.     **Let me phrase it this way, then.**

12                 **The Forest Service knew what Molycorp's**  
13    **plan was for the land, right?**

14          A.     Yes.

15          Q.     **That they would dispose of waste rock on**  
16    **it?**

17          A.     Yes.

18          Q.     **And specifically, we're talking, the land**  
19    **exchange was a big area but we are specifically**  
20    **talking the slopes on the north side of the Red**  
21    **River Valley where the three large rock piles stand**  
22    **today, correct?**

23          A.     Yes.

24          Q.     **As part of the land exchange, the Federal**  
25    **Government, the Forest Service in particular,**

1       undertook an environmental assessment weighing the  
2       pros and cons of the proposed exchange and  
3       ultimately recommended it, right?

4           A.     Correct.

5                    MR. TODD:  Let's take a look at CX281.

6       And again, we have seen this document before.

7           Q       (By Mr. Todd) Dr. Quivik, you have reviewed  
8       this document, right?

9           A.     Yes.

10          Q.      It's discussing a lot of things, right?

11          A.     Yes.

12          Q.      One of the things it discusses at some  
13       length are the economic benefits that the Questa  
14       Mine provided to Northern New Mexico, right?

15          A.     Yes.

16          Q.      The report discusses how economically  
17       beneficial Molycorp had been up to that point for  
18       the Town of Questa, right?

19          A.     Yes.

20          Q.      And for Northeast New Mexico, generally?

21          A.     Yes.

22          Q.      It noted that Molycorp was the largest  
23       employer in Northern New Mexico?

24          A.     Yes.

25          Q.      It discusses the positive economic impacts

1 on Taos County, more generally?

2 A. Yes.

3 Q. It notes for the Town of Questa benefits  
4 such as a new school, incorporation of the town, a  
5 police department, a fire department, modernized  
6 homes, those kind of things, right?

7 A. Yes.

8 Q. It also notes that the mine is supplying a  
9 needed mineral resource for the nation?

10 A. I don't recall those words, but I will  
11 take your word for it. I wouldn't be surprised.

12 Q. Okay. I can pull it up for you. It is in  
13 the record.

14 A. Okay.

15 Q. Now, we saw back in that January '69  
16 meeting that the Forest Service has to appraise the  
17 selected lands before providing them to Molycorp,  
18 right?

19 MR. TODD: Could we pull up, please,  
20 CX259.

21 Q (By Mr. Todd) Dr. Quivik, you recognize  
22 this document as the appraisal of the exchange  
23 lands?

24 A. Yes.

25 MR. TODD: Could we go to Page 3, please.

1                   If you would just call out the numbered  
2 list at the top there.

3                   This is a list to, quote, "Summary and  
4 Facts and Conclusions."

5                   Do you see that?

6                   A.       Yes.

7                   Q.       **Dr. Quivik, who does this document state**  
8 **is the owner of the selected lands?**

9                   A.       Number one, the United States.

10                  Q.       **And what did the appraiser conclude was**  
11 **the highest and best use of this land?**

12                  A.       Open pit mine dump.

13                  Q.       **And the appraiser recommended that this**  
14 **land be provided to Molycorp for that purpose,**  
15 **right?**

16                  A.       Yes.

17                  Q.       Okay. Thank you.

18                  Okay. Last topic.

19                  In your testimony, Dr. Quivik, you tell  
20 the Court that after the discovery of the geological  
21 weakness in the west wall of the open pit, you see  
22 no evidence that the United States approved  
23 Molycorp's revised mining plan in 1969 and that  
24 Molycorp alone decided to keep mining with an  
25 increase in stripping ratio.

1                   **Do you recall that testimony?**

2           A.       Yes.

3           Q.       Now, through the land exchange, as we have  
4       discussed, the U.S. provided land to Molycorp for  
5       the placement of waste rock, right?

6           A.       Yes.

7           Q.       And you agree that without a place to  
8       place the waste rock, the mine would have had to  
9       shut down, right?

10          A.       Yes.

11          Q.       Now, the land exchange, as I think you  
12       have already intimated, was not Molycorp's preferred  
13       approach in January of '69, right?

14          A.       Well, they were exploring mill site  
15       claims.

16          Q.       **Right.**

17          A.       The Forest Service informed them that mill  
18       site claims would be an option -- excuse me, a land  
19       exchange would be an option to mill site claims.

20          Q.       That meeting in January of '69, Molycorp  
21       proposed to locate mill sites crossing the road on  
22       the river and to use them to construct a waste drop  
23       dump across the valley, right?

24          A.       Yes, that is a separate issue, and the two  
25       should not be conflated.

1           **Q.       The land exchange and the mill site plan?**

2           A.       No, the land exchange and where to place  
3       the rock.

4           **Q.       I am not sure I follow you, but I am going**  
5       **to keep going.**

6           **Okay.   But you don't --**

7           A.       Excuse me, how to acquire land to place  
8       waste-rock dumps and where to place the rock  
9       should -- those two should not be conflated.

10          **Q.       That is fair, because you could get land**  
11       **and not put rock on it.**

12          A.       Right.

13           And there were a variety of places that  
14       were potential for placing the rock, and one of  
15       them, an idea that Molycorp floated, was to fill the  
16       Red River Canyon with waste rock. And a separate  
17       issue was how was Molycorp going to gain title to  
18       the land where it placed the waste rock.

19           So we have got lots of correspondence  
20       about those possibilities but we have almost no  
21       concrete record of what might have been entailed in  
22       the idea, the concept of dumping waste rock in the  
23       canyon.

24           And we don't really know how Molycorp  
25       proposed to acquire land across -- across the river

1 from its mining operation.

2 Q. Okay. Well, I suspect we are going to  
3 unpack all of that as we go through here.

4 Let's start with mill site claims.

5 A mill site claim is a type of claim that  
6 could be located under the Mining Law of 1872,  
7 right?

8 A. Yes.

9 Q. And it doesn't host mining itself, but  
10 rather, it hosts activities that support mining on a  
11 mining claim?

12 A. Correct.

13 Q. And those support activities could include  
14 milling, roads, other support services, right?

15 A. Yes.

16 Q. And as you admitted forthrightly earlier,  
17 it could include waste-rock storage, correct?

18 A. Yes. Or dumping.

19 Q. Or dumping.

20 And a mill site claim can be patented in  
21 the same manner as an unpatented mining claim can,  
22 right?

23 A. A similar procedure, a different set of  
24 boxes that would have to be checked before a patent  
25 can issue.

1 Q. That is a very fair answer.

2 What I meant was, an unpatented mill site  
3 claim can be patented and converted to prior -- to  
4 private ownership?

5 A. Yes.

6 Q. Right.

7 Just as an unpatented mining claim can be  
8 patented and converted to private ownership?

9 A. Yes.

10 Q. Now, the January 1969 meeting, in your  
11 testimony you characterized this as, "Nothing more  
12 than a preliminary conversation about an idea  
13 Molycorp then chose not to pursue."

14 And you also call it, "a verbal exchange  
15 of preliminary ideas."

16 That is your testimony?

17 A. That is all we have a record of, is the  
18 verbal exchange, yes.

19 Q. Okay. That is what there is a record of?

20 A. Yes.

21 Q. Okay. Now, you don't actually know,  
22 sitting here today, how detailed Molycorp's  
23 presentation actually was, right?

24 A. No.

25 Q. You don't know whether Molycorp used any

1 documents in making its presentation?

2 A. No.

3 Q. You don't know what documents were  
4 prepared or in what level of detail, right?

5 A. That's correct.

6 Q. Okay. You don't know how long the parties  
7 discussed the idea, right?

8 A. Right.

9 Q. You don't know how long the meeting  
10 lasted?

11 A. Correct.

12 Q. And you don't know how vigorous the debate  
13 was?

14 A. Correct.

15 Q. That is what we don't know --

16 A. We don't even know if there was a debate.

17 Q. Well, I think the meeting notes suggested  
18 that there was some debate, but let's move on.

19 Let's review what we do know.

20 We do know that Molycorp, at least, made a  
21 proposal to the Forest Service that it would locate  
22 mill site claims, that came down the Red River  
23 Valley and extended across the road in the bottom of  
24 the valley, right?

25 A. Across the road and across the river to

1 the south side of the river.

2 Q. To the other side?

3 A. Yes.

4 Q. Okay. And we know that Molycorp proposed  
5 to use those lands for waste-rock disposal?

6 A. Yes.

7 Q. And we know that Molycorp proposed to  
8 protect the road and the river using culverts or  
9 tunnels, right?

10 A. We know that from other documents, not  
11 from those handwritten notes.

12 Q. We know that from the Forest Service's  
13 written account of the meeting prepared later,  
14 right?

15 A. Yes.

16 Q. And we know that Molycorp proposed to  
17 construct across these culverts using -- using waste  
18 rock, a bridge that would provide access to the  
19 other side of the valley, right?

20 A. Yes.

21 Q. And we know that the area under potential  
22 consideration ran roughly from the location of the  
23 mill site down to Columbine Canyon, right?

24 A. Yes.

25 Q. And as Dr. Rigby testified yesterday,

1 maybe it is the whole space, maybe it is less, just  
2 depending on what the ultimate plan was?

3 A. Yes.

4 Q. We know that Mr. Torgerson was Molycorp's  
5 chief engineer, right?

6 A. Yes.

7 Q. And we know that Mr. Torgerson would have  
8 been responsible for overseeing the locating of the  
9 mill site claims and the design and engineering of  
10 the rock pile, right?

11 A. Yes. You know, engineers like him, at  
12 different times, I am not sure who would have been  
13 in charge, but he was up there, yes.

14 Q. I can pull up your deposition testimony,  
15 if you would like. It is what we agreed at your  
16 deposition.

17 A. Yes.

18 Q. Okay. And we know from Mr. Dewey's  
19 testimony that Mr. Torgerson prepared some drawings  
20 or schematics, they unfortunately haven't survived  
21 to this day, right?

22 A. I heard that testimony.

23 Q. Okay. But, we did see yesterday, in fact,  
24 the Government used a map of the potential mill site  
25 claims, right?

1           A.     Yes. They had -- but those were mill site  
2     claims only on the north side of the river. So they  
3     didn't address the idea of filling the Red River  
4     Canyon with waste rock. They were only for  
5     acquiring the land where the current -- basically  
6     where the current waste dumps sit.

7           Q.     **We can pull it up, if you would like.**

8                   **Those claims do extend across the road to**  
9     **the bottom of the valley, right?**

10          A.     To the bottom but not across.

11          Q.     **We will get there. We will get to it in a**  
12     **minute, I assure you.**

13                   **You're not in a position to contradict**  
14     **Mr. Dewey's recollections, are you?**

15          A.     I wasn't there.

16                   MR. TODD: And well, let's pull up that  
17     map, please, now. It is CX216.

18                   And let's go to the map, which I think is  
19     the third page.

20                   And, Patty, can you blow up maybe that  
21     area right there?

22          Q     **(By Mr. Todd) Dr. Quivik, do you see the**  
23     **southern extent of the mill site claims?**

24          A.     I do.

25          Q.     **Do you see the R38?**

1 A. Yes.

2 Q. The mill site claims extend slightly past  
3 the R38, right?

4 A. Yes.

5 Q. The river is right next to the road,  
6 right?

7 A. Yes.

8 Q. I think they are not both shown clearly  
9 here.

10 MR. TODD: We can put that down, thanks.

11 A. Wait. May I talk about it some?

12 Q (By Mr. Todd) Sure.

13 A. This is a sketch map, a sketch drawing to  
14 suggest a concept, an idea, and the amount of land  
15 that is south of the highway is very small and could  
16 accommodate a very small amount of waste rock had  
17 they planned to dump it right there.

18 And so that drawing could as easily  
19 reflect what it does so that the southeastern  
20 border, I will call it, is -- doesn't cover up the  
21 road so that everyone can see the road.

22 Q. Your speculation, looking at this, is that  
23 they drew the mill site claims past the road just so  
24 we can see the road?

25 A. Yes, so we can see where the road is and

1 not to obfuscate the road.

2 Q. This area of the land to the south of the  
3 road and the river that I have drawn, Forest Service  
4 land, right?

5 A. Yes.

6 Q. Not withdrawn from the mineral entry,  
7 right?

8 A. No. In fact, there were mining claims  
9 staked there.

10 Q. And Molycorp could have located mill site  
11 claims, too, right?

12 A. Could have, yes.

13 Q. Now, we know back to the meeting we do  
14 know that at the meeting Mr. Taylor said he would  
15 not agree to locating a mill site claim that crossed  
16 the road and the river, right?

17 A. He said he would oppose the idea.

18 Q. Okay.

19 MR. TODD: Can we bring back up 210?

20 Q (By Mr. Todd) Handwritten notes, and I'm  
21 going to read the second sentence here.

22 His handwriting is better than mine.

23 "Mr. Taylor advised that they would" --

24 A. Excuse me. This would not agree it is  
25 another one that says would oppose, so --

1           Q.     Well -- and specifically what he is not  
2 agreeing is that -- to the proposed mill site claims  
3 extending across the road, right?

4           A.     Right.

5           Q.     The proposal was to have them go across  
6 the road, according to these notes, right?

7           A.     Yes.

8           Q.     And instead, as the notes reflect,  
9 Mr. Taylor suggested the land exchange?

10          A.     Yes.

11          Q.     Now, in your testimony, you assert that  
12 after -- you testified, that after this meeting  
13 Molycorp chose to move on with the land exchange and  
14 not to pursue the valley fill plan, right?

15          A.     Yes.

16                    MR. TODD: Let's pull back up CX212,  
17 please, which is Mr. Watson's letter to the Forest  
18 Service following up on the meeting.

19                    And in this letter -- let's highlight  
20 Paragraph 2, please. I'm sorry, Page 2,  
21 Paragraph 2.

22          Q     (By Mr. Todd) Mr. Watson said, following  
23 the meeting after the Forest Service has declared  
24 its opposition to this plan, he write, "Should it be  
25 determined that all or a portion of the claims are

1       nonmineral, then it is, of course, our contention  
2       that mill sites could be located upon it and that  
3       the use of the area for dumps is a legitimate mill  
4       site use."

5                    **Do you see that?**

6       A.       Yes.

7       Q.       So as of this letter, at least, Mr. Watson  
8       was still holding out hope for the valley fill plan,  
9       right?

10      A.       No, he was suggesting that if the land  
11       exchange that -- this letter is basically saying, we  
12       will start negotiating a land exchange but it is our  
13       position that if the land exchange doesn't go  
14       through, we still believe that we can acquire title  
15       to the land using mill site claims.

16                   There is no mention here of filling the  
17       Red River Canyon with waste rock.

18      Q.       Well, what the first sentence says,  
19       Dr. Quivik, "Should it be determined that all or a  
20       portion of the claims are nonmineral."

21                   **Do you see that?**

22      A.       Yes.

23      Q.       Doing an examination of the land was a  
24       requirement for the land exchange, right? And to  
25       exchange, the lands had to be nonmineral, right?

1 A. That is my understanding.

2 Q. So the precondition here, that would be  
3 something that would allow the land to go through,  
4 right?

5 A. It would have confirmed the condition of  
6 the land exchange, but the lands were nonmineral.

7 Q. He then states, "Molycorp's position that  
8 they could use mill sites to establish these dumps,"  
9 and you have already agreed several times that  
10 Molycorp did have that right, under the law, right?

11 A. Yes.

12 Q. This letter, you would agree with me,  
13 suggests that at this time the Forest Service was  
14 articulating a different view. That, in fact, they  
15 could not use mill sites, quote/unquote, for waste  
16 rock, right?

17 A. I have seen that correspondence, that some  
18 people in the Forest Service were questioning  
19 whether waste dumps was the proper use of mill  
20 sites.

21 Q. Okay. Let's go --

22 MR. TODD: Can you get rid of that,  
23 please.

24 Let's blow up the next paragraph, please.

25 Q (By Mr. Todd) This is the next paragraph of

1 the same letter.

2 And Mr. Watson writes, "As you know from  
3 our conference" -- and I think that is a reference  
4 to the January meeting, would you agree?

5 A. I agree.

6 Q. "As you know from our conference, Molycorp  
7 originally contemplated locating mill sites in most  
8 of this area. Perhaps Mr. Parde hasn't been able to  
9 verify that mill sites can be acquired for dumping  
10 of waste materials."

11 Do you see that?

12 A. Yes.

13 Q. Does that suggest that Mr. Parde was  
14 raising a question whether Molycorp could dispose of  
15 waste rock on mill sites?

16 A. Yes.

17 Q. And Mr. Watson wants to know whether  
18 Mr. Parde has come up with anything to support that  
19 legal interpretation, right?

20 A. Right.

21 MR. TODD: Let's pull up CX216, which is  
22 Assistant Regional Forester John Kone.

23 Q (By Mr. Todd) He responds -- you are  
24 familiar with this letter, right?

25 A. Yes.

1                   Q.     April 18, 1969.

2                   MR. TODD:  Let's call up the last  
3 paragraph, place.  The bottom two lines.

4                   Q     (By Mr. Todd) And so the Assistant Regional  
5 Forester responds to Mr. Watson's inquiry and  
6 writes, "With regard to the propriety of mill site  
7 locations, our attorney has not yet been able to  
8 determine whether mill site claims can properly --

9                   MR. TODD:  The next page, please.

10                  Q     (By Mr. Todd) -- been used for mine waste,  
11 dumps."

12                  Do you see that?

13                  A.     Yes.

14                  Q.     He also raises a question, which was  
15 discussed yesterday, about the shape of the mill  
16 site claims?

17                  A.     Yes.

18                  Q.     Okay.  And you saw that fan on the side of  
19 the hill?

20                  A.     Yes.

21                  Q.     Mr. Fredley testified yesterday that  
22 Federal law -- the Federal law that establishes mill  
23 site claims dictates an acreage but not a shape.

24                  You don't have any reason to disagree with  
25 that, do you?

1 A. No.

2 Q. In the last paragraph of this letter --

3 MR. TODD: Let's highlight that, please,  
4 and call it out, I should say.

5 Q (By Mr. Todd) Assistant Regional  
6 Forester Koen writes, "We recognize that sufficient  
7 land adjacent to the mine for waste dumps must be  
8 made available to Molycorp really by some means."

9 Do you see that?

10 A. Yes.

11 Q. Okay. So to the Forest Service views,  
12 this as something they have to do?

13 A. Yes.

14 Q. It continues, "However, since there is an  
15 area of about 2400 acres of National Forest land  
16 involved, we believe it necessary to initiate a  
17 friendly validity contest to determine if mill site  
18 claims or mining claims can be located solely for  
19 the purpose of mine waste disposal if Molycorp  
20 intends to hold the land under the Mining Laws."

21 Did I read that correctly?

22 A. Yes.

23 Q. The reference to hold the land under the  
24 Mining Laws, that means by mill sites, right?

25 A. Yes. He names mining claims and mill

1 sites but it's the mill site idea.

2 Q. And the question that would be put to  
3 issue in this, "friendly validity contest," is to  
4 determine if mill site claims can be located solely  
5 for the purpose of mine waste disposal.

6 Do you see that?

7 A. Yes.

8 Q. And you would agree that what the  
9 Assistant Regional Forester is saying here is that  
10 if Molycorp wants to proceed with its mill site  
11 approach instead of the land exchange, then the  
12 Forest Service would initiate a validity contest to  
13 test whether that was appropriate?

14 A. Yes.

15 Q. Now, Mr. Watson wrote back to Mr. Koen a  
16 few days later.

17 MR. TODD: Let's pull up CX217.

18 Actually, we can take that down.

19 Q. (By Mr. Todd) Now, as you agreed with me  
20 the first thing this morning, you are not familiar  
21 with how validity contests are conducted, right?

22 A. Not in great detail. I have a broad  
23 understanding but not in great detail.

24 Q. And Mr. Fredley has testified that a  
25 validity contest could last from five to up to even

1       **ten years.**

2                   **Do you recall that?**

3       A.       Yes.

4       **Q.       You are not offering any opinion**  
5       **contradicting Mr. Fredley's testimony regarding**  
6       **validity contests, are you?**

7       A.       No. The only thing to point out is that  
8       they had been operating with each other in good  
9       faith and he uses the word friendly validity claim.  
10      And so it could have been that he was suggesting,  
11      let's just test this one question and not contest  
12      it, but test it.

13      **Q.       That's what he could have been suggesting?**

14      A.       Could have been, yeah. We don't know but  
15      that is why he does say, "a friendly one."

16      **Q.       He does use the word friendly?**

17      A.       Yes.

18      **Q.       But just to confirm, you're not in a**  
19      **position to contradict Mr. Fredley's testimony**  
20      **regarding the validity contest, are you?**

21      A.       In general if two parties are contesting  
22      each other, I am not in a position to contradict his  
23      testimony.

24      **Q.       Thank you.**

25                   **Now in your testimony you state that**

1       **Molycorp decided to apply to obtain title to the**  
2       **land through a land exchange with the Forest Service**  
3       **because that was cheaper and easier?**

4           A.       Yes.

5           Q.       And in assessing the costs, Molycorp would  
6       have included financial costs such as surveyors and  
7       lawyers, right?

8           A.       Yes.

9           Q.       The cost of locating the claims?

10          A.       Yes.

11          Q.       And costs would also have included loss of  
12       time or disruptions to operations, right?

13          A.       Well, I am not sure about disruptions of  
14       operations because the operations were not disrupted  
15       while they were waiting for the land exchange to go  
16       through. They knew they could continue operating as  
17       they were and one way or another this acquisition of  
18       title would happen whether it is through mill site  
19       claims or the land exchange.

20          Q.       My question goes specifically to Molycorp  
21       weighing whether or not to risk a validity contest.

22          A.       But you are assuming that it would be  
23       contested not friendly, right?

24          Q.       Well, either way.

25          A.       Yeah.

1           Q.     Either way.  If Mr. Fredley is correct as  
2     Molycorp would have known, a validity contest could  
3     last a long time?

4           A.     Yeah.  A land exchange could last a long  
5     time, right.

6           Q.     It ended up lasting four years, right?

7           A.     Yeah.

8           Q.     November of '69 to January of '74?

9           A.     Right, four years.  And Molycorp's  
10   operations were not interrupted during that period.

11          Q.     They weren't because Molycorp didn't risk  
12   the validity contest, right?

13          A.     No, no, I mean their mining operations  
14   weren't interrupted even though it took four years.

15          Q.     I appreciate that.

16            In the land exchange process they were not  
17   interrupted?

18          A.     Right.  A friendly validity contest might  
19   have been completed in a shorter period of time.

20          Q.     And an unfriendly validity contest might  
21   have taken up to ten years?

22          A.     No one is talking to an unfriendly  
23   validity contest.

24          Q.     Have you ever heard someone use the term  
25   friendly when they actually meant hostile?

1           A.     We are talking about people who work  
2     together and want to cooperate, the Forest Service  
3     and Molycorp, so this seems collegial to me.

4           **Q.     That is your opinion?**

5           A.     Yes.

6           **Q.     Okay. Do you recall your deposition?**

7           A.     Excuse me?

8           **Q.     Do you recall your deposition?**

9           A.     Oh, yes.

10            MR. TODD: Let's pull up Page 603, Line 3  
11     through 11.

12           **Q.     (By Mr. Todd) Sir, were you asked the  
13     following question and did you give the following  
14     answers, I will start on Line 4.**

15           **"Would the cost of a validity contest to  
16     Molycorp merely be financial or might Molycorp also  
17     measure it in terms of time?"**

18           ANSWER: "Absolutely, those would be  
19     costs."

20           QUESTION: "What would the time -- how  
21     will the time be a cost? What would be the  
22     relevance of time?"

23           ANSWER: "That could delay the mining  
24     operation," and you represented to me how long they  
25     would last.

1                   That was your sworn testimony, right?

2                   A.        Yes.  We were talking about whether this  
3                   would actually be a friendly validity contest.

4                   I remember that you commented in the  
5                   deposition that that could be a sarcastic remark,  
6                   but we didn't have an opportunity to delve into it  
7                   in this kind of depth at my deposition.

8                   Q.        **You're not disputing Mr. Fredley's**  
9                   **testimony that a validity contest could last five to**  
10                   **ten years?**

11                   MR. HARRISON:  Objection, asked and  
12                   answered.

13                   MR. TODD:  It hasn't been answered very  
14                   clearly, Your Honor.  I'm not asking about this  
15                   case, I just want a straight answer as a general  
16                   matter whether a validity contest could last five to  
17                   ten years.

18                   Q.        **(By Mr. Todd) Mr. Fredley so testified,**  
19                   **you are not contradicting him, right?**

20                   A.        I am not contradicting him.

21                   Q.        **Thank you.**

22                   **Now, as you have noted several times in**  
23                   **your testimony and here this morning, Molycorp did,**  
24                   **in fact, have a right under the Mining Laws to**  
25                   **locate mill site claims and place waste rock on**

1       **them, right?**

2           A.       Yes.

3           Q.       **And that is different than what Mr. Koen**  
4       **told Mr. Watson and what the Forest Service told**  
5       **Molycorp in early 1969, right?**

6           A.       Yes. I can't explain why he would have  
7       said that because I have seen earlier comments by  
8       Forest Service people expressing that understanding  
9       and as the land exchange was getting underway, again  
10      Forest Service people were expressing their  
11      understanding that Molycorp could get this land  
12      through mill site claims. So I can't explain why he  
13      would have made that statement in 1969.

14          Q.       **Thank you, sir.**

15           MR. TODD: Let's pull up CX281, which is  
16       the environmental assessment.

17          Q.       **(By Mr. Todd) In the 1972 environmental**  
18       **assessment, the Forest Service discussed**  
19       **alternatives to the exchange, right?**

20          A.       Yes.

21           MR. TODD: And let's go to Page 7 of the  
22       PDF.

23           There we go. Thank you, Patty.

24          Q.       **(By Mr. Todd) One alternative listed on**  
25       **the second, which is the second paragraph here,**

1     would have been to prohibit the dumping of waste on  
2     Forest Service land entirely.

3                    Do you see that?

4     A.     Yes.

5     Q.     And the U.S. rejected that for the reason  
6     you have already identified, which is Molycorp could  
7     have used mill site claims to grab the land and  
8     place waste rock, right?

9     A.     Yes.

10    Q.     The Government wrote, "The mining company  
11    has every right to use mill sites for those disposal  
12    areas," right?

13    A.     Yes.

14    Q.     And that is consistent with your  
15    understanding?

16    A.     Yes.

17    Q.     The environmental assessment here also  
18    describes Molycorp's valley fill proposal in some  
19    detail, and you referenced this earlier.

20                    MR. TODD: So let's highlight the first  
21    paragraph, please.

22    Q.     (By Mr. Todd) And so this is Forest  
23    Service's description of what Molycorp had proposed  
24    in January of 1969. And it reads: "One of the  
25    company's proposals is to dump the waste into the

1 Red River Canyon from a point just below the mine to  
2 the mouth of Columbine Canyon. This plan would  
3 require a tunnel for rerouting State Route 38 and a  
4 diversion of the Red River. This is the least  
5 expensive means of disposing of the overburden, but  
6 the impact on the environment and ecology of the Red  
7 River Canyon would be tremendous. The proposal has  
8 been vigorously opposed by the Forest Service and  
9 ecologists groups. Because of this opposition, the  
10 Company has made other proposals."

11 Do you see that?

12 A. Yes.

13 Q. Now this assessment acknowledges that the  
14 Forest Service had vigorously opposed the proposal  
15 when it was made, right?

16 A. Yes.

17 Q. And that was back in '69.

18 The Forest Service also asserts here that  
19 the plan was opposed by ecology groups.

20 Do you see that?

21 A. Yes.

22 Q. Now the Forest Service in its sworn  
23 testimony has been unable to identify ecology,  
24 ecologists or environmental groups that this  
25 referred to. You are not aware of who this refers

1 to either, right?

2 A. No.

3 Q. Lastly the Forest Service asserts that the  
4 impact on the environment and ecology would be  
5 tremendous.

6 Do you see that?

7 A. Yes.

8 Q. Now, you know, you agree, that the Forest  
9 Service -- let me back up.

10 The Forest Service has acknowledged in its  
11 sworn testimony that it never undertook any  
12 environmental analysis of Molycorp's proposal.

13 Do you have any reason to dispute that  
14 testimony?

15 A. No, especially because they had nothing on  
16 which to base an analysis.

17 Q. And you're not aware of any such analysis?

18 A. Right, correct.

19 Q. And nor have you seen any Forest Service  
20 or other Federal agency document that analyzed the  
21 relative ease or relative cost or ease of  
22 remediation of either the valley fill concept or  
23 placing waste rock on just the north slope of the  
24 Red River Valley, right?

25 A. No, Molycorp to our knowledge did not

1 provide any of those kinds of detailed plans. Did  
2 not submit a proposal and so the Forest Service  
3 could not have done that kind of analysis.

4 **Q. Okay. And that takes care of the valley**  
5 **fill plan, no analysis of that. By question had two**  
6 **components. You also have seen no study by the**  
7 **Forest Service of the cost of remediability of**  
8 **placing rock on just the north slopes of the Red**  
9 **River Valley instead of across the valley, right, no**  
10 **comparative analysis?**

11 A. No, that wasn't an issue in this.

12 Q. **And as the environmental assessment here**  
13 **documents in the last sentence, we have noted the**  
14 **vigorous opposition by the Forest Service here and**  
15 **these unidentified ecology groups, right?**

16 A. Yes.

17 Q. **And as the Forest Service writes here in**  
18 **the last sentence, "Because of this option, the**  
19 **Company has made the other proposals," right?**

20 MR. TODD: Your Honor, no further  
21 questions.

22 THE COURT: Thank you. Can you redirect  
23 in six minutes?

24 MR. HARRISON: No, Your Honor.

25 THE COURT: I think we will take our noon

1 recess until 1:30. We'll be in recess.

2 (A recess was taken.)

3 THE COURT: Good afternoon. You may be  
4 seated. You may redirect if you must.

5 MR. HARRISON: Thank you, Your Honor.

6 THE COURT: You are still under oath.

7 THE WITNESS: Yes, Your Honor.

8 REDIRECT EXAMINATION

9 BY MR. HARRISON:

10 Q. Dr. Quivik, do you remember the questions  
11 about your experience and qualifications as an  
12 industrial historian?

13 A. Yes.

14 Q. And you acknowledge you're testifying here  
15 as an industrial mining historian?

16 A. Yes.

17 Q. Can you explain the importance and role of  
18 an industrial historian in a case like this?

19 A. A case like this took place across, or the  
20 facts that are being litigated in this case, a case  
21 like this took place across many decades.

22 And it is important to have an historian  
23 look at the evidence, look at the historical facts  
24 and be able to put together a meaningful explanation  
25 of how those facts unfolded, how, the basis on which

1       based on documentary evidence, various participants  
2       in that history did what they did and especially in  
3       cases like cases involving mining companies, to have  
4       an historian who is knowledgeable about mining  
5       engineering, about metallurgical engineering, about  
6       the other facets of the environments that mining  
7       companies operate in to be able to help explain that  
8       history as it unfolded.

9               One other thing that is important is that  
10       we all, as human beings, have a tendency to project  
11       what we know on to people in the past, and it is  
12       important for an historian to look at what those  
13       actors were doing, knowing what they knew then and  
14       not to project what we know now onto those past  
15       actions.

16               **Q.       Dr. Quivik, could you explain the**  
17       **historical importance throughout the 20th Century of**  
18       **the Lindley treatise that was talked about during**  
19       **your cross-examination as it relates to the Federal**  
20       **Government and also to mining companies?**

21               **A.       Yes. The Lindley treatise was a treatise**  
22       **describing the legalities of the Mining Law for**  
23       **people who are acting in the United States in the**  
24       **mining industry, both with regard to miners, mining**  
25       **companies on the one hand and people including**

1     Government officials on another hand who might want  
2     to know what are mining companies allowed to do  
3     under the Mining Act.

4           **Q.     And in your experience as an historian, is**  
5     **it your opinion that the Lindley treatise was relied**  
6     **on by mining companies and the United States?**

7            MR. TODD: Objection, leading.

8            THE COURT: Overruled.

9            A.     Yes. One of the examples I cite is a  
10    Mining Engineers Handbook by a person named Robert  
11    Peel, and it is one of the prominent texts in the  
12    field with sections on lots of different facets of  
13    mining, including engineering but also water rights  
14    and finance and management.

15           And there is one section on the law and he  
16    cites extensively from Lindley describing Lindley as  
17    the main treatise so that miners can understand what  
18    the level infrastructure is within which they are  
19    operating with regard to mining claims and other  
20    matters.

21           **Q.     Historically speaking how did the Mining**  
22     **Laws permit private parties to have the exclusive**  
23     **right to possess and mine Federal lands?**

24           A.     Well, normally one would think if someone  
25    owns a piece of land one would have to get

1 permission from the owner of that land to go onto  
2 the land and start exploring for minerals.

3                   And the Mining Act gave miners the right  
4 of entry on the land so they didn't have to notify  
5 the Government if they were entering the public  
6 domain to explore for minerals. And it gave miners  
7 the right to occupancy. So once they staked a  
8 claim, located a claim, filed it in a local office,  
9 clerk and recorders office in the county, they could  
10 occupy it, meaning start digging, start building  
11 improvements, all of those kinds of things and they  
12 could do those things without having to notify the  
13 Federal Government that they were doing those  
14 things.

15                   The only time necessarily that the  
16 Government would learn that they had entered public  
17 land had occupied public land is if the miner  
18 discovered a mineral and wanted to move that  
19 unpatented minor claim to a patent.

20                   **Q. And so was patenting required to mine or  
21 use the claims for mining purposes?**

22                   A. No. A miner could enter the land, occupy  
23 the land and then if the miner found exploitable  
24 minerals, could start mining, generating revenue,  
25 all of which the miner could do without notifying

1 the Government and without owing the Government  
2 anything.

3 Q. As a practical matter, you heard and were  
4 asked questions about Mr. Lindley's term, the  
5 paramount proprietor, or the paramount owner. That  
6 term is certainly used in Mr. Lindley's treatise,  
7 but as a practical matter could you discuss how  
8 Chevron or how a mining company would act on a  
9 property with respect to the possession of that  
10 property vis-a-vis the United States?

11 MR. TODD: Objection, Your Honor. I guess  
12 ambiguous and overbroad. The witness is being asked  
13 to describe how Chevron or every other mining  
14 company would act on some unidentified property.

15 THE COURT: Sustained.

16 Q (By Mr. Harrison) In your experience as a  
17 mining historian and in your review of the documents  
18 in this case, could you describe for the Court the  
19 efforts that Chevron, briefly describe the effort  
20 that Chevron did at the Questa site to suggest it  
21 had exclusive possession of the property?

22 THE COURT: I don't understand the  
23 question.

24 Q (By Mr. Harrison) I will rephrase.

25 What did Chevron do once it had staked

1       mining and mill site claims on at the Questa site to  
2       suggest that it had authority over that land?

3                    MR. TODD: Objection, ambiguous.

4                    THE COURT: I'm sorry?

5                    MR. TODD: I just objected again,  
6       Your Honor. I think the question is still ambiguous  
7       and overbroad.

8                    THE COURT: Yes.

9       Q        (By Mr. Harrison) I will move on, then.

10                  Dr. Quivik, as a mining historian are you  
11       familiar with how mining companies respond to  
12       possible changes in the Mining Laws and regulations?

13       A.       I have seen those responses unfold  
14       historically, yes.

15       Q.       You were asked about the Northern  
16       New Mexico economic policy.

17                  Do you recall being asked about that?

18       A.       Yes.

19       Q.       In your review of the historical documents  
20       in this case, is there anything to suggest to you  
21       that the Government would have acted any differently  
22       had that policy not been in place?

23       A.       No.

24       Q.       You were also asked about the exploration  
25       of the Questa Mine in the 1950s. In your review of

1       **the historical documents in this case, was it**  
2       **apparent to Chevron in the 1950s that there was the**  
3       **potential of low-grade ore at the Questa site?**

4           A.       They were aware that there was molybdenum  
5       all over the place and they were also aware from  
6       reports like Schilling's report and their own  
7       geologists' report, Carpenter's report that there  
8       was low-grade material in the area.

9           Q.       **And so because you know the potential of**  
10      **an ore body and in this case a low-grade ore body,**  
11      **are the methods for extracting that ore obvious and**  
12      **well-known?**

13       A.       Yes.

14       Q.       **And in this case what were those methods?**

15       A.       Well, as we have heard throughout the  
16      trial, in the first phase of mining at the Questa  
17      Mine, Molycorp was using selective underground  
18      mining, driving drifts and crosscuts and opening  
19      slopes and extracting ore and that was extracting  
20      high-grade ore that it could do at a profit.

21           With the low-grade material there would  
22      have been two options available to Molycorp that  
23      would have, it would have known about in the mining  
24      industry, one is block cave mining and we have heard  
25      that described and the other is open pit mining and

1 we have heard that described.

2 Q. Was diamond drilling prevalent in the  
3 mining industry in the 1950s?

4 A. Yes.

5 Q. In your review of the documents in this  
6 case, what is your opinion about the availability of  
7 funds that Chevron had in the 1950s prior to the  
8 DMEA loan?

9 A. Well, I have seen the documents that show  
10 that Molycorp raised funds through sales of stock  
11 and through bank loans.

12 Q. You were also asked questions about DMEA  
13 generally, and do you recall those questions?

14 A. Yes.

15 Q. What is your understanding of DMEA's  
16 programs support for molybdenum exploration as  
17 compared to the DMEA program support for other  
18 minerals exploration?

19 A. There were three categories of metals for  
20 which the DMEA would make loans for exploration.  
21 Two of those metals, uranium and cobalt, were of  
22 such a status that the DMEA would make a loan of  
23 90 percent of the exploration costs to the mining  
24 company.

25 There were a couple of other metals

1 tungsten and manganese for which DMEA would make a  
2 loan of 75 percent of the cost and then, as we have  
3 heard throughout this testimony, DMEA would make  
4 loans of 50 percent for molybdenum and that is in  
5 the same category as lead, zinc, copper and other  
6 metals.

7 **Q. Are you aware of any other mines at the**  
8 **time that used DMEA funding?**

9 A. Yes.

10 Q. **Are you aware of any mines at the time**  
11 **that did not use DMEA funding?**

12 A. Yes.

13 Q. **And did any of those mines include**  
14 **uranium?**

15 A. Yes.

16 Q. **Could you briefly explain that for the**  
17 **Court?**

18 A. Yes. I testified, Your Honor, in U.S. v.  
19 Newmont, which is the midnight Superfund midnight  
20 mine, Superfund case in the state of Washington.  
21 And that was a uranium mine, and it was discovered  
22 and explored during the 1950s, during this DMEA  
23 period and the developers chose to explore and  
24 develop that mine without DMEA assistance.

25 Q. **You were also asked about the control that**

1       **the DMEA had over Chevron during the DMEA contract.**

2                   **Do you recall being asked about that?**

3       A.       Yes.

4       **Q.       In terms of control, what is your opinion**  
5       **as to DMEA's control over Chevron?**

6       A.       Well, the agency was able to use its  
7       influence during the negotiation period to negotiate  
8       a contract with Molycorp that addressed some of the  
9       exploration objectives that DMEA thought would be  
10      more reasonable than what Molycorp wanted to do and  
11      also to convince Molycorp to use exploration methods  
12      that the DMEA thought would be more effective at  
13      this particular site.

14               And during that whole negotiation process,  
15      Molycorp was free to walk away from the  
16      negotiations, refuse to compromise and not get a  
17      loan, but Molycorp decided to compromise and enter  
18      that contract.

19       **Q.       And after entering into the DMEA contract**  
20      **did Chevron do exploration work on its own?**

21       A.       Yes.

22       **Q.       And any work that was deemed to be not**  
23      **covered by DMEA, could Chevron do that exploration**  
24      **work on its own as well?**

25       A.       Yes, and it did. It conducted, it drove

1       about as much in terms of drifts and crosscuts on  
2       its own account with its own funds as it did under  
3       the DMEA program. And it did not need permission  
4       from the Government or from the agency, to do that  
5       additional exploration work on its own.

6           **Q.       When did the Government determine that**  
7       **molybdenum was no longer a defense necessity?**

8           A.       About two months after the contract was  
9       signed.

10          **Q.       On cross-examination you were shown**  
11       **Chevron's DMEA application and also was called out**  
12       **to the statement that, "no known reserves and no**  
13       **other exploration work was planned."**

14           **Do you recall seeing that?**

15          A.       Yes.

16          **Q.       In your review of the historical documents**  
17       **in this case, do you believe that that is entirely**  
18       **correct?**

19          A.       Well, the reserves were that the  
20       high-grade reserves were exhausted and that may have  
21       been true that at that particular moment Molycorp  
22       had no other exploration program in mind.

23          **Q.       But was Molycorp also aware of the**  
24       **presence of low-grade ore at the time of its DMEA**  
25       **application?**

1           A.     I am sure it was.

2           Q.     **What did the DMEA final report --**

3           A.     I guess I should say it was aware of the  
4     low-grade material. No one knew yet whether it  
5     would qualify as ore.

6           Q.     **In the final report that DMEA issued, do**  
7     **you recall what DMEA concluded regarding the ore**  
8     **reserve that was located?**

9           A.     In general, yes.

10          Q.     **And what is that?**

11          A.     That it documented the three blocks of  
12     probable ore and also documented a much larger  
13     volume of low-grade material that was in the general  
14     area of the Questa Mine about which little was known  
15     as of yet.

16          Q.     **And what happened next?**

17          A.     Molycorp raised some more financing and  
18     began an exploration, some more exploration from  
19     that same level, the 7800-foot level.

20            In the beginning most of its exploration  
21     was towards the Southwest and in what was called the  
22     Southwest zone, and then in a year or two it began  
23     to devote some attention to exploration in the  
24     Northeast zone as well.

25            And would you like me to elaborate or just

1 in general?

2 THE COURT: Just answer the question.

3 THE WITNESS: Yeah, I am just wondering  
4 how much detail I should get into.

5 Q (By Mr. Harrison) That is good for now,  
6 thank you.

7 A. Okay.

8 Q. You mentioned the 7800 level. Was the  
9 DMEA-funded drilling at a different elevation and in  
10 a different block of ground as the open pit mine  
11 that was ultimately developed?

12 MR. TODD: Objection, Your Honor, that  
13 exceeds the scope of cross. Dr. Quivik has a  
14 lengthy dissertation in his direct testimony on the  
15 relative location between the DME discover and the  
16 open pit. As you recall we discussed it with  
17 Dr. Rigby yesterday. I asked no questions at all  
18 about that testimony, so this is beyond the scope of  
19 cross.

20 THE COURT: Sustained.

21 Q (By Mr. Harrison) In your opinion as a  
22 mining historian, could Chevron have entered into a  
23 joint venture or other arrangement in an effort to  
24 develop a low-grade ore body?

25 THE COURT: Counsel, how can an historian

1 say what Chevron might have done under a different  
2 set of circumstances?

3 MR. HARRISON: Understood.

4 Q. (By Mr. Harrison) Dr. Quivik, are you  
5 aware of joint ventures that occurred between mining  
6 companies in the mid-20th Century?

7 A. Yes. Including between Molycorp and  
8 Kennecott.

9 Q. Could you just briefly describe that,  
10 please?

11 A. At the time that the -- in the mid-'50s  
12 and at the time that the DMEA exploration program  
13 was underway, Molycorp had a joint venture going  
14 with Kennecott for a mine in Québec.

15 And in other mining districts I have  
16 researched in the course of doing work on Superfund  
17 litigation, I have encountered a number of those  
18 kinds of instances when, or in which the owner of a  
19 set of mining claims entered into a joint venture  
20 with another usually larger mining company to have  
21 the larger mining company finance or help finance  
22 the exploration and oftentimes actually do the work,  
23 at least lend expertise and that sort of thing.

24 Q. As part of your testimony in this case did  
25 you develop an opinion as to the location of the ore

1       **bodies that were identified through DMEA?**

2           A.     Yes.

3           Q.     Did you come across any -- in developing  
4        that, did you come across any documents to support  
5        that position?

6           A.     Yes.

7           Q.     **What were some of those documents?**

8           A.     Well, Molycorp's final report, 1960. And  
9        then there were other documents that referenced that  
10       report, the OME's final report. Well, the  
11       certification is based on those reports. I don't  
12       recall that the certification necessarily specifies  
13       three blocks of material.

14           And then they were subsequently  
15        referenced, for instance, when Molycorp filed the  
16        patents and mining claims, and there was reference  
17        to those blocks beneath some of the mining claims  
18        Molycorp patented.

19           Q.     **In your review of the documents in this  
20        case, when was the extent of the ore body final and  
21        fully understood?**

22           A.     Well, the most recent information I have  
23        seen is a 2009 USGS document. A document that  
24        Dr. Rigby uses twice in his direct testimony for  
25        illustrating the Questa area.

1 MR. HARRISON: Can we show CX363, please.

2 If we could turn --

3 Q. (By Mr. Harrison) Is this the document  
4 you are referring to?

5 A. Yes.

6 MR. HARRISON: If we could turn to Page 5?

7 MR. TODD: Your Honor, I will interpose an  
8 objection again on exceeding the scope of cross, if  
9 I am correct as to where Mr. Harrison is going with  
10 this.

11 THE COURT: I will overrule it at this  
12 time.

13 MR. HARRISON: If we could zoom in on the  
14 area, there.

15 Q. (By Mr. Harrison) Could you please  
16 explain what this map shows with respect to the ore  
17 bodies at the Questa site?

18 A. Yes, this shows the -- Your Honor, you can  
19 see a kind of brown horseshoe-shaped body there.  
20 That is what is called the central ore body and in  
21 case you are interested, the Northern part of that  
22 was oftentimes called the Northeast zone and the  
23 southern part oftentimes called -- excuse me, the  
24 Northeast zone and then the Southwest zone.

25 And it wasn't until relatively or recently

1 from the literature that people understood that that  
2 was one horseshoe-shaped ore body.

3 And then off to the northeast we can see  
4 underneath the outline of the open pit another ore  
5 body that is identified as the Sulphur Gulch ore  
6 body. And just to the -- there is a little line  
7 separating those two. I don't know if you can see  
8 that, Your Honor. There is a little lobe of the  
9 yellow material that is kind of right in the middle  
10 of the horseshoe. And then just to the -- extending  
11 downward and on this drawing and towards the right,  
12 there is a line there. That is an outline, and it  
13 is demonstrating that the Sulphur Gulch ore body is  
14 a distinct ore body from the central ore body.

15 And then on this page in the text  
16 describing this illustration there is some  
17 additional information which Dr. Rigby did not share  
18 with the Court, and that points out that the open  
19 pit is mining the Sulphur Gulch ore body and then  
20 the central ore body is one of the other ore bodies  
21 in the area. It is at much greater depth, and that  
22 would be an ore body that might have potential for  
23 block cave mining. But it is a distinct ore body  
24 from the ore body that was being mined by the open  
25 pit.

1                   MR. TODD: Your Honor, I renew my  
2 objection and move to strike that entire answer.  
3 That was entirely beyond the scope of cross. That  
4 was intended to --

5                   THE COURT: I will deny your motion to  
6 strike, but I would suggest that you start a whole  
7 new dialogue about stuff that was never discussed  
8 before.

9                   MR. HARRISON: Understood, Your Honor.

10                  Your Honor, if I may on that point,  
11 Dr. Rigby testified yesterday as to two new  
12 demonstrative exhibits on the easel. And in the  
13 normal course of a trial, Dr. Quivik would have been  
14 provided the opportunity to testify as to those  
15 during his direct examination.

16                  THE COURT: Well, he could have been here, too.

17                  MR. HARRISON: We were not aware of the  
18 drawings that were made on the easel yesterday at  
19 trial, and so we were wondering, or with the Court's  
20 indulgence, I would like to ask a few questions of  
21 those two demonstrative exhibits that Dr. Rigby drew  
22 yesterday in court that Dr. Quivik can testify to is  
23 the first time he has seen images like that?

24                  THE COURT: And as a, what, industrial  
25 historian it is relevant?

1                   MR. HARRISON: Dr. Quivik's rebuttal  
2 report does address certain areas of Dr. Rigby's  
3 report pertaining to the location and cites of  
4 drilling that was done in the open pit area.

5                   THE COURT: What significance is it?

6                   MR. HARRISON: The significance is that it  
7 goes to show the demonstrative goes to show that the  
8 marks on there are not approximate and not accurate  
9 as to where the actual drilling occurred and --

10                  THE COURT: So what? I mean, I don't  
11 think that that is an issue here. Nobody is saying  
12 that they drilled in the wrong place or that the  
13 lines are anything other than approximations. This  
14 is a whole new area you are getting into.

15                  MR. HARRISON: Understood, Your Honor. I  
16 think the point is that the drilling did not  
17 directly lead to the area of the open pit.

18                  THE COURT: What significance is it?

19                  MR. HARRISON: I will move on, Your Honor.  
20 Thank you.

21                  THE COURT: All right. Thank you.

22                  Q        **(By Mr. Harrison) So, Dr. Quivik, after the**  
23 **DMEA program ended in 1960, Chevron ultimately**  
24 **decided to develop an open pit mine?**

25                  A.       Yes.

1           Q.     Could you explain, based on your review of  
2     the historical documents in this case, the efforts  
3     that went into Chevron's development of the open pit  
4     mine, briefly, please?

5           A.     Well, after about three more years of  
6     exploration in an area much larger than had been  
7     explored under the DMEA program, Molycorp began  
8     exploring in an area that is now the open pit and  
9     the indications that that held promise as an open  
10    pit was the fact that there was a lot of molybdenum  
11    in the soils on the surface there.

12           And that led Molycorp to identify that  
13    area as a target distinct from the northwest, the  
14    Northeast zone and the Southwest zone. And that  
15    exploration ultimately led Molycorp to raise the  
16    money to actually develop an open pit mine there and  
17    that mine began operating in late '65 and full-scale  
18    operation in '66.

19           Q.     You were asked a lot of questions today  
20    about mining claims and mill sites and unpatented  
21    claims versus patenting of those claims, so I would  
22    like to ask you some questions about those now, as  
23    it relates to the open pit mine.

24           What is the significance of Chevron's  
25    staking mining and mill site claims for the land

1     **around the open pit?**

2                   THE COURT: I'm sorry, I don't understand  
3     that question.

4     **Q     (By Mr. Harrison) Did Chevron stake mining  
5     and mill site claims around the open pit?**

6     A.     Yes.

7     **Q.     Why did it do that?**

8     A.     Well, the mining claims that it staked  
9     around what became the open pit it had already  
10    staked.

11                  There was a core group of mining claims  
12    and then as Molycorp came to recognize that it  
13    appeared that there is more and more area of  
14    mineralized, potentially mineralized with  
15    molybdenum, it staked mining claims on a pretty  
16    large area that I think was something like 12 miles  
17    long and several miles wide.

18                  And the Questa Mine is roughly at the  
19    middle of that area, and so the significance of  
20    staking those claims is that Molycorp had a pretty  
21    good idea that there was a lot more molybdenum in  
22    the area and it wanted to make sure that it had the  
23    rights to explore, develop and possibly mine those  
24    potential mineral deposits and not a competitor.

25                  We know from the history that at one point

1     Climax was in the area trying to stake mining claims  
2     as well.

3                   The significance of Molycorp staking mill  
4     site claims is that Molycorp could only gain title  
5     to a mining claim if they could demonstrate that  
6     they had discovered a mineral, and then they could  
7     apply for patent. If they needed other lands to  
8     support their mining activities for milling, for  
9     disposing of waste, for building support facilities,  
10    any of the kinds of things that would have to occur  
11    to support a mining activity, the Mining Law of 1872  
12    gave them a right to stake mill site claims.

13                  And they could locate them, again, without  
14    notifying the Government that they were doing so,  
15    without asking permission to do so and they could  
16    start using them immediately. And in order to apply  
17    for patent to those mill site claims, they had to  
18    have occupied the mill site claim, meaning they had  
19    to have some kind of improvement on the mill site  
20    claim.

21                  So they were using that as a method to  
22    acquire land they needed if they didn't think that  
23    they could acquire it through the mining claim  
24    route.

25                  **Q.     And so one of the uses of the mill site**

1 then is for waste disposal?

2 A. Yes.

3 Q. Did you review any documents pertaining to  
4 waste-rock disposal and the capacity of that at the  
5 Questa site?

6 A. I am not sure what you mean by capacity.

7 Q. Did you review any corporate documents  
8 that analyzed the location of waste-rock piles and  
9 plans for waste-rock dumping?

10 A. Yes, both feasibility studies and other  
11 planning documents.

12 MR. HARRISON: Could we show CX282.

13 Q. (By Mr. Harrison) This is the 1972  
14 feasibility study. Is this one of the documents  
15 that you reviewed?

16 A. Yes.

17 MR. HARRISON: If you could turn to  
18 Pages 18 and 19.

19 Q. (By Mr. Harrison) Dr. Quivik, what is  
20 your opinion as to the -- at the bottom of Page 18,  
21 the dumps available and future dumps sections?

22 MR. TODD: Objection, exceeds the scope of  
23 cross. Again, I asked no questions about the actual  
24 mechanics of the valley fill plan.

25 THE COURT: That's correct.

1           Q     (By Mr. Harrison) Dr. Quivik, do you see on  
2     Page 19 -- strike that.

3                   You were also asked about the tailings  
4     pipeline areas and the special use permit.

5                   Do you recall that testimony?

6           A.     Yes.

7           Q.     And you were asked whether it was a  
8     discretionary act of the Forest Service to grant the  
9     special use permit?

10          A.     Yes.

11          Q.     Did you hear Mr. Fredley's testimony  
12     yesterday that the process that the Forest Service  
13     went through was proper?

14          A.     Yes.

15          Q.     You were also asked about the BLM land  
16     exchange and the appraisal report, which was CX259.

17                   Do you recall being asked about that  
18     today?

19          A.     BLM land exchange?

20          Q.     Excuse me, the public sale auction.

21          A.     Yes, okay. Could you repeat the question,  
22     please.

23          Q.     Yes.

24                   You were also asked about the appraisal  
25     report from the BLM public land sale auction?

1 A. Yes.

2 Q. And do you recall in there you were shown  
3 that it was the, quote, highest and best usage of  
4 that area for the tailings impoundment area?

5 A. Yes.

6 Q. What is the purpose of an appraisal report  
7 as part of this land, the public sale land auction?

8 A. Well, I think that there are a couple of  
9 functions. One is to try to get a sense of what the  
10 value might be. And another is to assess or  
11 appraise its possible uses and to allow that  
12 information to inform the Government of whether or  
13 not this would be a sale that would be proper and in  
14 the public interest as well as, of course, the  
15 person who wants to purchase it.

16 Q. So the public uses that were identified in  
17 the appraisal report, those aren't the required  
18 usage, uses of the property, is it?

19 A. No.

20 Q. What could a mining company like Chevron  
21 do on Federal lands once it located a mining or mill  
22 site claim?

23 A. Anything as long as they are not violating  
24 the law. And if it is in the Forest Service, then,  
25 of course, they can't do commercial logging and

1 stuff like that.

2 Q. And what could the Federal Government do  
3 once a mining company or individual had located  
4 claims on Federal lands?

5 A. Well, in many instances the Federal  
6 Government wouldn't even know about it until years  
7 later if a patent was applied for.

8 And if the Federal Government did know  
9 about it, I suppose the Government could look to see  
10 if there were any laws being violated. But other  
11 than that, pretty much nothing.

12 Q. You were asked on direct a lot of  
13 questions about the January 1969 meeting and were  
14 asked to make a lot of assumptions about what was  
15 discussed or not discussed or what was presented and  
16 what was not presented.

17 THE COURT: You said on direct  
18 examination?

19 Q (By Mr. Harrison) Excuse me, your  
20 cross-examination.

21 Do you recall being asked those questions?

22 A. Yes.

23 Q. In your review of the documents in this  
24 case to form your opinion -- strike that.

25 What documents did you rely on to form

1       **your opinion about the January 1969 meeting?**

2           A.       The handwritten notes that I saw during my  
3       cross-examination and the reference to that meeting  
4       in, I believe it is the 1972 planning or feasibility  
5       study, where that conference appears to be  
6       referenced.  And I think those are the -- well, and  
7       then in February in Mr. Watson's letter to the  
8       Forest Service suggesting that Molycorp would like  
9       to move towards a land exchange.  There is a  
10      reference to the conference, but it says little  
11      about it other than the idea of a land exchange was  
12      suggested.

13       **Q.       As an historian would you have expected  
14       other documents from the January 1969 meeting to  
15       have been preserved or at least part of the records  
16       of either Chevron or the Forest Service?**

17           MR. TODD:  Objection, calls for  
18       speculation.

19           THE COURT:  Sustained.

20       **Q       (By Mr. Harrison) So you just mentioned the  
21       February 20, 1969 letter.**

22           MR. HARRISON:  If we could bring that up,  
23       please, CX212.

24       **Q.       (By Mr. Harrison) Is this the letter  
25       where Chevron requests the land exchange?**

1           A.     Yes. It is not the formal application,  
2     that came later in the year, but this is the letter  
3     in which Molycorp says that it is going to apply for  
4     a land exchange.

5           Q.     **In your review of the documents in this**  
6     **case, did you come across any correspondence or**  
7     **other documents to suggest that Chevron was not**  
8     **intent on pursuing the land exchange after this**  
9     **point?**

10          A.     No.

11          Q.     **And so I just want to be clear when I ask**  
12     **you a few questions about this and the subsequent**  
13     **letters, but are there two issues going on at this**  
14     **time with respect to the Forest Service and**  
15     **Molycorp?**

16          A.     Well, I guess there is, there remains the  
17     question because Mr. Watson brings it up here of  
18     whether Molycorp could get the land by following the  
19     mill site route, and so that is a question.

20                 And then will the land exchange work, so  
21     those are the two issues that are still being  
22     explored here by Molycorp, which of those routes  
23     would be preferable.

24          Q.     **But these communications don't pertain to**  
25     **the Red River plan that you have heard about?**

1 MR. TODD: Objection, leading.

2 THE COURT: Sustained.

3 Q (By Mr. Harrison) Do these plans refer to  
4 the Red River plan, or excuse me, does this letter  
5 refer to the Red River plan or anything related to  
6 property that is on the south side of the river and  
7 highway?

8 A. No.

9 Q. And, in fact, you were asked in your  
10 cross-examination about the top of Page 2 of this  
11 document, the first two paragraphs, or maybe the  
12 first three.

13 MR. HARRISON: If we could turn to Page 2.

14 Q. (By Mr. Harrison) The first sentence  
15 references Parcels 1 and 2. What is your  
16 understanding as to where those parcels are located  
17 on the site?

18 A. They are all on the north side of the  
19 river. Parcel 1 is basically a little bit southeast  
20 of the open pit mine and then there is a strip of  
21 mill site claims overlaying what is called the Moly  
22 tunnel, and that is the axis into the underground  
23 workings from basically along the river. And  
24 MolyCorp had acquired that land through mill site  
25 claims.

1                   And then the rest of it is, the major  
2 portion of the acreage is, I will say southwest,  
3 west and a little bit northwest of the open pit  
4 mine.

5                   Q.     And if you will look at the last paragraph  
6 on the call-out it says, "As you know, from our  
7 conference Molycorp originally contemplated located  
8 mill sites in most of this area."

9                   What is your understanding as to what  
10 "this area" means?

11                  A.     The area being proposed, Parcels 1 and 2  
12 for the land exchange.

13                  Q.     Not the area south of the river?

14                  A.     Correct.

15                  Q.     Around this time did Molycorp also propose  
16 an idea about fan-shaped mill sites?

17                  A.     Yes.

18                  MR. HARRISON: If I could show CX216 at 3.

19                  Q.     (By Mr. Harrison) You were asked on your  
20 cross-examination about the extent to which these  
21 mill site proposed mill sites went south.

22                  Do you recall being asked those questions?

23                  A.     Went south of the river?

24                  Q.     Correct.

25                  A.     Yes.

1                   **Q.     And in reviewing this document where do**  
2                   **the proposed mill sites end?**

3                   A.     Well, again, it is my contention that this  
4                   is more of a sketch map than a precise survey map,  
5                   and so the edges are just south of the highway.

6                   **Q.     Are you aware of Chevron ever staked these**  
7                   **fan-shaped claims?**

8                   A.     I have seen no documentation that these  
9                   were ever staked or located. I think this was a  
10                  sketch to illustrate to the Forest Service an idea  
11                  and explore the possibilities of pursuing this idea.

12                  **Q.     And you heard the testimony earlier this**  
13                  **week about the fan-shaped plan, it was an end around**  
14                  **of the mill site requirements?**

15                  A.     I can't remember if that exact wording was  
16                  used, but anyhow, it was a way to be able to stake  
17                  and patent a lot of mill sites instead of having to  
18                  do them in sequence as waste rock made its way down  
19                  the hills onto additional mill site claims.

20                  **Q.     So it made it easier for Chevron, it would**  
21                  **have made it easier to Chevron to be able to patent**  
22                  **those mill site claims?**

23                  A.     Had Chevron pursued this route, yes.

24                  MR. HARRISON: If we could go to CX216.

25                  **Q.     (By Mr. Harrison) You were also asked**

1       **about this question on your cross-examination, but I**  
2       **want to ask about a different issue in here, the**  
3       **third paragraph starts with, "With regard to"?**

4           A.     Yes.

5           Q.     **What is your understanding of this**  
6       **paragraph and the statements about the need to**  
7       **relinquish or adjudicate the unpatented mining**  
8       **claims?**

9           A.     It is my understanding that the Forest  
10      Service could not have engaged in the land exchange  
11      if there were already claims to the land to be  
12      exchanged.

13           And to be very precise, that meant even  
14      claims owned by the party that would receive these  
15      lands in a land exchange. So the Forest Service  
16      would want to make sure that those claims, those  
17      mining claims were relinquished before the exchange  
18      could be completed.

19           Q.     **And the Forest Service also mentions there**  
20      **was an alternative to the relinquishment of those**  
21      **claims and that would be a validity contest?**

22           A.     Yes.

23           Q.     **And, again, this goes to the tracts**  
24      **adjacent to the open pit mine?**

25           A.     Yes.

1           Q.     That ultimately ended up being the subject  
2     of the land exchange?

3           A.     Yes, plus some additional lands.

4           Q.     In your review of the documents, were  
5     there, in fact, conflicting or pending claims on  
6     some of the land exchange land?

7           A.     Yes.

8           Q.     And in your review of the documents, do  
9     you recall seeing a suggestion from Chevron that the  
10   Forest Service initiate a validity contest to  
11   resolve those claims?

12          A.     Yes. They were claims owned by a couple  
13     of other parties and Chevron suggested initially  
14     that perhaps the Forest Service could initiate a  
15     validity claim, a validity contest against those  
16     claimholders. And if it demonstrated that they were  
17     not mineralized and therefore invalid claims, then  
18     they could be included in the land exchange.

19           As I recall, Molycorp decided, for  
20     expediency, they would just drop that issue for the  
21     time being and that is why when you look at a map of  
22     what Parcel 2 looks like, there is kind of a  
23     rectangular area to the southwest that was omitted.

24           Once Molycorp resolved those conflicting  
25     claims, it then applied for a land exchange and

1 received patent to those claims as well.

2 Q. So also in this letter --

3 MR. HARRISON: If we could go to the top  
4 of Page 2.

5 Q. (By Mr. Harrison) -- discusses not only  
6 the land exchange process that we just talked about  
7 with the relinquishment or the validity contest, but  
8 it also discusses the shape of the mill site claims  
9 that we were just discussing.

10 Do you see that?

11 A. Yes.

12 Q. And what does the Forest Service say about  
13 the shape of the claims as it pertains to the  
14 possible patenting of them?

15 A. "We doubt that the Mining Law contemplated  
16 individual site claims of 2,000 to 3,000 feet in  
17 length and we would prefer 5-acre mill sites that  
18 were rectangles to conform with legal subdivisions  
19 on surveyed land."

20 Q. And it also notes concern about the  
21 fan-shaped nature of the mill sites?

22 A. Yes, the shape of the mill site claims as  
23 proposed.

24 Q. In your experience -- strike that.

25 In your review of the documents in this

1 case, did you see any other proposed mill sites or  
2 mining claims, or actual mill sites or mining claims  
3 where Chevron put forward something other than a  
4 rectangular shape or something similar to that?

5 A. The one -- they are 90-degree angles.  
6 There was a set of mill site claims along the river  
7 and the Forest Service already had a use for, I  
8 believe it was a campground, and so there was  
9 already a use for kind of the southeast end of some  
10 of those claims. And I forget now who suggested the  
11 solution, but if you will look at the property  
12 boundary of those claims combined, it is kind of a  
13 sawtooth pattern along there, so it is all 90-degree  
14 angles but they're not rectangles, probably  
15 speaking.

16 Q. But nothing like the fan-shapes or the  
17 long skinny mill sites that are here?

18 A. Correct.

19 Q. You were asked in your cross-examination  
20 if the Forest Service rejected Molycorp's mill site  
21 applications for the area that was -- that we have  
22 seen before on CX216 at Page 3, the fan-shaped mill  
23 sites.

24 Do you recall being asked that question?

25 A. If the Forest Service rejected them?

1                   Q.        **Yes.**

2                   MR. TODD: Objection, Your Honor.

3                   A.        I don't recall that precise question, no.

4                   **Q        (By Mr. Harrison) To your knowledge, did**  
5                   **Chevron ever apply for patents on those mill sites?**

6                   A.        No.

7                   **Q.        Did Chevron continue dumping on the area**  
8                   **adjacent to the open pit while the land exchange was**  
9                   **pending?**

10                  A.        Yes.

11                  MR. HARRISON: With the Court's  
12 indulgence.

13                  THE COURT: Thank you. You may step down.  
14                  (Whereupon, the witness was excused.)

15                  THE COURT: You may call your next  
16 witness.

17                  MR. HOSHIJIMA: The United States calls  
18 Dr. Jay Brigham.

19                  THE COURT: Brigham?

20                  MR. HOSHIJIMA: Brigham, yes.

21                  (Whereupon, the witness was sworn.)

22                  THE COURT REPORTER: Please state and  
23 spell your full name for the record.

24                  THE WITNESS: My name is Jay Brigham. My  
25 last name is spelled, B-R-I-G-H-A-M.

1                   THE COURT: You may proceed.

2                   MR. HOSHIJIMA: Dr. Brigham, did you  
3 submit written direct testimony for this case?

4                   THE WITNESS: Yes, I did.

5                   MR. HOSHIJIMA: Have you identified a  
6 small correction to a citation in that written  
7 direct?

8                   THE WITNESS: Yes, I have.

9                   MR. HOSHIJIMA: In Paragraph 36 should the  
10 citation to USX082.001 actually be a citation to  
11 another page in the same document, which is  
12 USX082.0012?

13                  THE WITNESS: That is correct.

14                  MR. HOSHIJIMA: Does that correction  
15 change the substance of your testimony?

16                  THE WITNESS: No, it does not.

17                  MR. HOSHIJIMA: With that correction is  
18 your written testimony true and correct to the best  
19 of your knowledge?

20                  THE WITNESS: Yes.

21                  MR. HOSHIJIMA: The United States offers  
22 Dr. Brigham's direct testimony.

23                  THE COURT: Thank you.

24                  (Dr. Jay Brigham's direct testimony was  
25 prefilled and admitted.)

1 CROSS-EXAMINATION

2 BY MR. HOPSON:

3 Q. Good afternoon, Dr. Brigham.

4                   A.        Good afternoon, Counsel.

5 Q. I don't think we have ever met, I am Mark  
6 Hopson. I am one of the lawyers representing  
7 Chevron in this case.

8 A Nice to meet you, sir

9 Q. I have seen you in the courtroom. I think  
10 we have exchanged nods a couple of times?

11 A. I believe you are correct.

12 Q. Dr. Brigham, you offer up an opinion and I  
13 am actually reading from your direct testimony at  
14 Paragraph 46, that the U.S. historical policies with  
15 respect to molybdenum had virtually no direct impact  
16 on Molycorp's mining operations at Questa, right?

17 A. That's correct. I take your word that you  
18 read it correctly.

19 Q. Okay. Just two qualifiers there. Your  
20 report really did focus on direct impacts not  
21 indirect impacts, correct?

22 A. My report was looking at what I would say  
23 is high-level Government policies really beginning  
24 right before the Second World War into the  
25 mid-1970s.

1           Q.     And in reaching that opinion I think we  
2     can agree you did not consider every Federal agency  
3     policy or Federal agency action that might have had  
4     an impact on the Questa Mine, correct?

5           A.     Yes, sir.

6           Q.     What you did look at is programs like the  
7     Defense Plant Corporation, that was one of them,  
8     right?

9           A.     Yes, sir.

10          Q.     You looked at the Emergency Plant  
11     Facilities Contract program, right?

12          A.     Yes.

13          Q.     And without going through all of them, you  
14     also looked at a Certificate of Necessity program  
15     that provided for accelerated tax depreciation,  
16     correct?

17          A.     That's correct.

18          Q.     And you agree that Molycorp would not  
19     necessarily have had to apply for or receive one of  
20     these specific benefits to be encouraged to increase  
21     production?

22          A.     I believe that's correct.

23          Q.     Now, your focus, as you said, was on these  
24     World War II era and Korean War era programs, right?

25          A.     Those were two of my focuses.

1           Q.     Right. You didn't consider, for example,  
2     whether the Mining Law of 1872 had any impact on how  
3     **Molycorp developed the Questa Mine?**

4           A.     I did not examine the 1872 Mining Law.

5           Q.     Okay. And you didn't consider to what  
6     extent the Forest Service's Northern New Mexico  
7     policy caused the Forest Service to encourage or  
8     take actions to facilitate the mining at Questa,  
9     right?

10          A.     I did not look at that.

11          Q.     You didn't focus on whether special use  
12     permits were granted to Molycorp by the Forest  
13     Service to enable or facilitate the development of  
14     the mine?

15          A.     I did not.

16          Q.     You didn't consider the extent to which  
17     the land exchange, which we have talked a lot about,  
18     facilitated or encouraged the development of the  
19     Questa Mine?

20          A.     I did not.

21          Q.     You didn't look at the extent to which the  
22     land exchange actually affected the current location  
23     of mine waste at the Questa site?

24          A.     No, I did not.

25          Q.     And you also didn't consider any actions

1       of the Bureau of Land Management and how that might  
2       have impacted the Questa Mine?

3           A.       No, I did not.

4           Q.       That includes, of course, looking at sales  
5       of land by the BLM, rights of way granted to  
6       Molycorp by the BLM, and easements granted to BLM.  
7       That is all excluded from the basis of your opinion,  
8       right?

9           A.       That's correct.

10          Q.       One of the things that you looked at, in  
11       addition to what we have already talked about, is  
12       the operation of the U.S. Government's stockpile of  
13       molybdenum and you looked both at the so-called  
14       Metals Reserve Company and the later national  
15       stockpile, correct?

16          A.       Yes, sir.

17          Q.       And you do agree that molybdenum was  
18       considered a strategic and critical mineral that was  
19       on the United States' stockpile list until 1970?

20          A.       Yes.

21          Q.       And molybdenum actually physically  
22       remained in the U.S. Government's stockpile until  
23       1975?

24          A.       The sales to remove or to get rid of the  
25       molybdenum, if you will, from the stockpile had been

1       made but the deliveries had not yet been, the  
2       deliveries had not yet been done.

3           **Q.       Just like any other stockpile, they just**  
4       **gradually sold it off, right?**

5           A.       Yes, gradually.

6           **Q.       You do know that only two companies**  
7       **produced molybdenum primarily, and those were Climax**  
8       **and the Questa Mine, correct?**

9           A.       Yes.

10          **Q.       And we can agree, I think, that you don't**  
11       **have to sell to or buy from the stockpile to**  
12       **recognize that if the Government is making a market**  
13       **it can affect the price, right?**

14                   **(Brief pause in proceedings.)**

15          **Q.       (By Mr. Hopson) We both understand that**  
16       **the Government's purchases could increase demand and**  
17       **have an affect on price, right?**

18          A.       It could, yes, sir.

19          **Q.       And releasing materials, selling materials**  
20       **from the stockpile could cause prices to go down?**

21          A.       That is certainly the case, although, as I  
22       testified to in my deposition referencing the  
23       Government's 30(b)(6) witness, the Government was  
24       very cognizant of that and took steps to avoid it.  
25       And I also think that comes through in the

1 documentation.

2 Q. Right. They didn't want to dump a lot of  
3 materials from any stockpile on the market at once  
4 and drive down the price, right?

5 A. Yes. They are very cognizant of not  
6 wanting to negatively impact any one industry.

7 Q. Now, we have to go back a little ways, but  
8 you do write that the United States did purchase  
9 some molybdenum from Molycorp during World War II,  
10 right?

11 A. Yes, sir.

12 Q. And you used a document that lists war  
13 supply contracts, but only those contracts above  
14 \$50,000?

15 A. That's correct. That is the caveat with  
16 that document.

17 Q. Right. But you found that Molycorp had  
18 ten contracts totaling \$2,371,000 to sell molybdenum  
19 to the stockpile, correct?

20 I could pull the document up. This is not  
21 a memory test, if you want me to pull the document  
22 up.

23 A. I know the document quite well and your  
24 characterization of it is correct, however, I  
25 believe those sales were actually to the Treasury

1       Department which I would believe meant that they  
2       were going into the land lease program.

3           **Q.       Fair enough.**

4           **And from all we can tell, that molybdenum**  
5       **did come from the Questa Mine, right?**

6           A.       I am not 100 percent sure of that. It  
7       certainly could have. It is my understanding that  
8       Molycorp also had the roasting facilities that was  
9       actually from the roasting facilities according to  
10      that document. And perhaps the molybdenum came from  
11      either Questa or from another party that Molycorp  
12      purchased it from.

13          **Q.       Are you referencing Urad, the roasting**  
14       **facility there?**

15          A.       I know Urad was, had some production  
16      during the war, they had some labor issues as well.  
17      I am not sure if they could have also been  
18      purchasing from a third party.

19          **Q.       Fair enough.**

20           **You're familiar with the DMEA program,**  
21       **isn't that correct?**

22          A.       That is correct.

23          **Q.       In fact, you have researched the DMEA**  
24       **program for other expert testimony or expert reports**  
25       **that you provided over time, right?**

1 A. Yes, I have.

2 Q. And you know the DMEA was established to  
3 encourage production of strategic minerals?

4 A. Yes.

5 Q. And one of those minerals was molybdenum,  
6 right?

7 A. Yes, it was one of a number.

8 Q. And while you didn't focus on it, you did  
9 note in your testimony that the U.S. entered into a  
10 DMEA loan with Molycorp in May 1957, right?

11 A. Yes, sir.

12 Q. And you know, because of your other  
13 background, that the U.S. Geological Survey or the  
14 Bureau of Mines would often go on-site and provide  
15 some technical advice or assistance in the context  
16 of negotiating these DMEA contracts, right?

17 MR. HOSHIJIMA: Objection. It goes beyond  
18 the scope of the direct exam in which we did not  
19 have Dr. Brigham look at the DMEA program in the  
20 context of this site.

21 MR. HOPSON: It is impeachment,  
22 Your Honor. His broad opinion is narrowed by not  
23 looking at the DMEA program.

24 THE COURT: Overruled.

25 Q (By Mr. Hopson) So what I was asking you is

1       you know that Federal employees with expertise in  
2       mining might go on-site, boots on the ground, to  
3       offer advice and assistance to companies who are in  
4       the process of seeking DMEA funding, correct?

5           A.       Yes, USGS and/or BOM employees.

6           Q.       And there could be some back and forth  
7       between the applicant and the DMEA as these  
8       contracts were negotiated, right, sir?

9           A.       That's correct.

10          Q.       You do know and have testified that at the  
11       time of the DMEA contract, the underground mine had  
12       pretty much played out and they were looking to stay  
13       in business in Questa, right?

14          A.       Yes.

15          Q.       And you also know that Molycorp was hoping  
16       that a DMEA contract and exploration would allow  
17       that to happen?

18          A.       Well, I am certainly aware they made the  
19       application and the application was approved. I  
20       think it was a good business decision to seek out  
21       the funding.

22          Q.       Do you have any reason to believe it is  
23       not accurate to say that the DMEA assistance enabled  
24       Molycorp to explore new ore sources?

25          A.       Well, by definition under the DMEA program

1 it had to be for exploration of new sources as  
2 opposed to existing operations.

3 Q. Right. So the fact is the DMEA program  
4 did enable Molycorp to explore for new ore sources,  
5 right?

6 A. Yes.

7 MR. HOPSON: I have no further questions,  
8 Your Honor.

9 THE COURT: Thank you.

10 You may redirect.

11 REDIRECT EXAMINATION

12 BY MR. HOSHIJIMA:

13 Q. Dr. Brigham, you were asked at the  
14 beginning of that cross-examination about various  
15 World War II era programs that the Government had to  
16 incentivize the production of certain materials,  
17 correct?

18 A. Yes.

19 Q. You were asked about the Defense Plant  
20 Corporation program?

21 A. Yes, I was.

22 Q. And a facilities contract program whose  
23 name you will be able to tell me?

24 A. The Emergency Facilities contract.

25 Q. You were also asked just now about the tax

1 depreciation program, correct?

2 A. Yes.

3 Q. Were any of those programs specific to  
4 molybdenum?

5 A. No. In fact, they were economy-wide and  
6 quite broad in what especially Defense Plant  
7 Corporation, what could be funded.

8 Q. And you were asked and testified about how  
9 those were World War II and Korean War era programs,  
10 correct?

11 A. Well, to be accurate there was a World  
12 War II set of policies and then they were reenacted  
13 in September of 1950 with the Production Act.

14 Q. You were asked whether there was World  
15 War II and Korean War period policies would have had  
16 an indirect impact on Molycorp's operations at the  
17 Questa Mine, right?

18 MR. HOPSON: That misstates the prior  
19 testimony, Your Honor, objection.

20 THE COURT: Restate your question.

21 Q (By Mr. Hoshijima) These World War II and  
22 Korean War policies, did they have a direct impact  
23 on the Questa Mine?

24 A. I don't think a direct impact, no.

25 Q. Why not?

1           A.     Well, Molycorp did not -- chose not to  
2     participate in these programs, so that would to me  
3     mean they didn't have a direct impact.

4           Q.     **Mr. Hopson asked you whether they could**  
5     **nonetheless encourage or have encouraged Molycorp's**  
6     **production of molybdenum, correct?**

7           A.     If they had chosen to participate I think  
8     that could have happened.

9           Q.     **Supposing such encouragement could have**  
10    **happened, what was happening in the timeline of the**  
11    **Questa site at the time of these programs?**

12          A.     Are we talking -- are you asking for both  
13    World War II period and the Korean period?

14          Q.     **Let's go one at a time.**

15          A.     Well, that during World War II they,  
16    obviously, the underground, the first underground  
17    mine was still being operated and that actually was  
18    the case during Korea, though I believe there were  
19    some signs that the mineralized ore had started to  
20    tail out.

21          Q.     **All of these programs that Mr. Hopson**  
22    **asked you about were before the open pit mine,**  
23    **correct?**

24          A.     Yes, sir.

25          Q.     **How would you characterize generally the**

1       **United States' policy about defense-related**  
2       **materials during World War II and the Korean War?**

3           A.     Well, especially during World War II,  
4     which was much larger in scale and scope in many  
5     ways than Korea, but it also is applicable to the  
6     Korean War period. The concern was how to manage  
7     scarcity. There was an overwhelming demand for  
8     metals, minerals, fuels, almost an endless list of  
9     commodities and items, and the Government needed  
10    to -- the Government had to institute programs to  
11    encourage further development, further use and also  
12    to make sure that those engaged in production for  
13    either of the wars were receiving the materials over  
14    those who were engaged in production that was not  
15    essential to the war, or the wars in this case.

16       **Q.     Was there any change in that national**  
17       **defense policy by the time Molycorp had started the**  
18       **open pit mine at Questa?**

19       A.     Well, I believe, you know, you originally  
20    asked me about wartime policies, which I described.  
21    I do believe there was a change in the  
22    United States' defense posture in the mid-1950s  
23    after the Korean War.

24       **Q.     How would you describe that change?**

25       A.     The change was a result of the election of

1 President Eisenhower, who pledged in the war in  
2 Korea, which he did. President Eisenhower also had  
3 a very great concern about balancing the budget and  
4 reducing defense spending.

5 To that end he came up with what was  
6 deemed the New Look defense policy, which was much  
7 more relying on the Air Force and the nuclear  
8 deterrent, at that time, bombs but within a few  
9 years missiles, as well as covert operations.

10 And again it was largely motivated by a  
11 concern with spending and Federal spending. I think  
12 that impacts a lot of what we actually talked about  
13 with the move away, you know, the decline in the  
14 stockpile, the expense associated with it, excuse  
15 me, and those types of things.

16 Q. **To be clear are we talking about --**

17 MR. HOPSON: Your Honor, I am going to  
18 object. This is very interesting but far beyond the  
19 scope of my cross.

20 THE COURT: That's correct.

21 Q **(By Mr. Hoshijima) How would you describe**  
22 **the impact that a change in policy in the 1950s had**  
23 **on the United States' defense interest in**  
24 **molybdenum?**

25 MR. HOPSON: Beyond the scope, Your Honor.

1                   THE COURT: Sustained.

2                   Q     (By Mr. Hoshijima) You were asked on your  
3     cross-examination about various other laws like the  
4     Mining Law or the Northern New Mexico policy.

5                   Do you recall that?

6                   A.    Yes.

7                   Q.    And other Forest Service and land  
8     management agencies policies, like special use  
9     permits?

10                  A.    I recall those questions.

11                  Q.    Do you have expertise generally with the  
12    United States' historic defense policy during this  
13    time period? And by that, I mean the '50s and the  
14    '60s?

15                  A.    Yes.

16                  Q.    Were those programs considered important  
17    parts of a national defense policy?

18                  A.    Those aren't programs that I would  
19    normally think of when I would be thinking of a  
20    national defense policy.

21                  Q.    You were also asked about the national  
22    defense stockpile and molybdenum's inclusion in that  
23    stockpile, correct?

24                  A.    Yes.

25                  Q.    You were asked about how there was

1       molybdenum in that stockpile until the 1970s.

2                   Do you recall that?

3       A.       I recall those questions.

4       Q.       When does the amount of molybdenum in the  
5       stockpile peak?

6       A.       It was in 1956.

7       Q.       Are you aware of the United States  
8       purchasing any molybdenum for the stockpile at any  
9       point after that time?

10      A.       No, I am not.

11      Q.       In fact was there a time after that when  
12       the Government was diverting deliveries to the  
13       stockpile?

14      A.       Well, it was in 1956 when they diverted,  
15       first made a diversion from the stockpile. And I  
16       believe I might have misspoke a moment ago, it is  
17       '56, '57 were the high points.

18      Q.       So why is it, then, that there is  
19       molybdenum in the stockpile until the 1970s if the  
20       Government's really not acquiring any more after the  
21       mid-1950s?

22      A.       Well, there is a couple of reasons. By  
23       the late '50s Congress was starting to look at this  
24       and there was concern about it, as I have mentioned.  
25       The expense of maintaining the stockpile, not just

1       molybdenum, but the entire stockpile, there is quite  
2       a few things in it. It took Congress several years  
3       until 1962 to pass the first law to authorize sales  
4       out of it.

5                   And there were subsequent laws, obviously,  
6       but as I testified, there was a concern that you  
7       don't want to flood the market of molybdenum or any  
8       other market.

9                   **Q.       You were asked at last about purchases**  
10      **that the Government made of molybdenum from Molycorp**  
11      **during World War II.**

12                   **Do you recall that testimony?**

13                   A.       Yes.

14                   **Q.       You were asked if you could say whether**  
15      **any of the molybdenum came from the Questa site.**

16                   **Do you recall that?**

17                   A.       Yes.

18                   **Q.       What are the other possible sources that**  
19      **Molycorp could have had for the molybdenum that it**  
20      **sold to the United States in World War II?**

21                   A.       Well, as I believe I have testified, the  
22       Urad mine in Colorado did have some production and  
23       then it is possible that the roasting facilities at  
24       Molycorp in Washington, New York, Pennsylvania,  
25       perhaps purchased it on the market.

1           Q.     Are you aware of any evidence that would  
2     suggest one way or the other if it is more likely  
3     that the molybdenum that Molycorp sold under those  
4     contracts came from Questa or from one of those  
5     other sources?

6           A.     I have seen nothing to indicate from where  
7     that material came from.

8           Q.     Because we don't have that historical  
9     documentation anymore?

10          A.     That is correct. Those contracts have  
11     long since been destroyed.

12          Q.     Do you know if Molycorp ever sold  
13     molybdenum to the United States at any point after  
14     World War II?

15          A.     Not with certainty.

16          Q.     Are you aware of any evidence that the  
17     Government purchased molybdenum from Molycorp after  
18     World War II?

19          A.     Again, we don't have that, we don't have  
20     that documentation. I can't testify one way or the  
21     other.

22          Q.     If Molycorp was not selling molybdenum to  
23     the United States, who would it have been selling to  
24     after World War II?

25          A.     Other private enterprise, steel companies,

1 other companies that would use molybdenum for one  
2 thing or another.

3 **Q. Were private steel companies, then, the**  
4 **major consumers of molybdenum?**

5 A. I know from the documentation that the  
6 majority of molybdenum went into steel, steel  
7 products into steel, yes.

8 **Q. Do you know if most of those steel**  
9 **products would have eventually been bought up or**  
10 **used by the United States Government?**

11 A. Well, I am sure some of those steel  
12 products were used for by the Government for defense  
13 or other purposes. I would also suspect some went  
14 to, into the private market.

15 **Q. Well, what were some of the possible uses**  
16 **of that molybdenum containing steel in the private**  
17 **market?**

18 A. Well, people use steel for many things.  
19 You could use it for bridge building, you could use  
20 it for any number of things. You could use it in  
21 the, you know, the '50s and the '60s were the age of  
22 the big cars, they still had a lot of steel in them.  
23 They wouldn't surprise me.

24 **Q. And when you say cars, are you talking**  
25 **about passenger cars that private citizens would**

1       **use?**

2           A.       Yes, Detroit, for lack of a better phrase.

3           Q.       **You were asked by Mr. Hopson about the**  
4       **DMEA program.**

5                   **Do you recall that?**

6           A.       Yes.

7           Q.       **Now, to be clear, you weren't asked to**  
8       **review Molycorp's documentation or the documentation**  
9       **relating to Molycorp's DMEA contract, correct?**

10          A.       Yes, I was, I was told that Dr. Quivik  
11       would review that. I was asked not to.

12          Q.       **Nonetheless do you have general knowledge**  
13       **of the DMEA program?**

14          A.       Yes, I do.

15          Q.       **And that is what Mr. Hopson asked you**  
16       **about, correct?**

17          A.       Yes, it is.

18          Q.       **Where does that knowledge come from?**

19          A.       I testified in my deposition, that was in  
20       December of 2019, that I had worked on the Federal  
21       resources case up in Northern Idaho.

22                   Since my deposition I was asked to work on  
23       the Gold King case involving the Domingo Mining  
24       District in Colorado, and I looked at a number of --  
25       well, actually they were DMEA and also OME

1 contracts.

2 Q. Based on that other experience which  
3 Mr. Hopson asked you about, do you have knowledge  
4 about the end of the DMEA program?

5 A. Yes, I do.

6 Q. When and how did the DMEA program come to  
7 an end?

8 A. It officially came to an end in the spring  
9 of 1958.

10 At that time it was decided that the  
11 defense element of it was no longer needed. So the  
12 DMEA went out of business, so to speak, and the OME  
13 replaced it.

14 The OME was -- and the documentation, it  
15 is in the record, was that although you don't need  
16 this encouragement for national defense, it is good  
17 public policy, anyway, for sound economic growth.

18 One of the differences between the DMEA  
19 and the OME is that under OME there was an interest  
20 component added, so it is not quite as favorable as  
21 it was under the DMEA.

22 Q. You said it was in 1958 that the DMEA  
23 program came to an end?

24 A. That is when it officially came to an end.

25 Q. That was less than a year after the DMEA

1       **contract in this case was signed?**

2           A.       Yes.   In fact, I believe it was in May of  
3       '58, so it was almost maybe exactly a year.

4           **Q.       So the DMEA contract that was signed here**  
5       **shortly before the end of the DMEA program, did the**  
6       **United States honor it?**

7           A.       Yes.

8                   MR. HOSHIJIMA:   Let's quickly pull up  
9       CX089, which has been previously admitted.

10          **Q.       (By Mr. Hoshijima) This is a 1958**  
11       **Government report.**

12                   **Are you familiar with this document?**

13          A.       Yes, I have seen this.

14                   MR. HOSHIJIMA:   Can you turn to PDF  
15       Page 20 of the report.   Under the heading Enactment  
16       of a New Program, can we magnify that first  
17       paragraph.

18          **Q.       (By Mr. Hoshijima) Do you see where it**  
19       **says that in 1957 ODM advised that there was no**  
20       **longer a defense necessity for the DMEA program?**

21          A.       Yes, I see that.

22          **Q.       Is that consistent with your understanding**  
23       **of the history of that program?**

24          A.       Yes, it is.

25          **Q.       And ODM, do you recall what that was?**

1           A.     I believe it is Office of Defense  
2     Management.

3           Q.     The sentence after that it says that all  
4     minerals and metals expansion goals had been filled  
5     and stockpiles of most such commodities were now  
6     sufficient.

7                   **Is the history of the United States'**  
8     **stockpile of molybdenum consistent with that**  
9     **statement?**

10          A.     Yes, it is.

11                   MR. HOSHIJIMA: I have no further  
12     questions.

13                   THE COURT: Thank you.

14                   You may step down, sir.

15                   THE WITNESS: Thank you, Your Honor.

16                   (Whereupon, the witness was excused.)

17                   THE COURT: You may call your next  
18     witness.

19                   MR. AUGUSTINI: No more witnesses,  
20     Your Honor.

21                   THE COURT: Thank you. We are out of  
22     witnesses. Do we have any idea when the next  
23     witness will be available?

24                   MS. CRISHAM PELLEGRINI: Your Honor, we  
25     just spoke with Dr. Haddad and his mother

Page 650

1 unfortunately took another turn for the worse and is  
2 in the hospital, so he is still unclear as to when  
3 he will be available, but he is hoping to find that  
4 out shortly. He will let us know and then we can  
5 confer with the Government.

6 THE COURT: Very good we will go into  
7 recess and wait on how his mom does and we will try  
8 to set up a date, as I say, probably the week after  
9 next at the earliest, depending on what happens to  
10 me in Denver.

11 So thank you-all for your presentations,  
12 they were very helpful, and we'll be in recess  
13 subject to call.

14 (Proceedings concluded at 2:57 p.m.)

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Page 651

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